# COLLEGE OF PHARMACY MASTER PLAN

## UNIVERSITY OF UTAH

**PREPARED FOR:**
University of Utah Facilities Planning and
Campus Design and Construction

**U OF U PROJECT NUMBER:**
0999-12767

**PREPARED BY:**

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## UNIVERSITY OF UTAH REVIEW SIGNATURES

We have reviewed the College of Pharmacy Master Plan and warrant that it adequately represents our request for a facility to fulfill our mission and programmatic needs. All appropriate parties representing the University have reviewed it for approval.

John W. Mauger — 11/10/06
John W. Mauger, Ph.D.
*Dean, College of Pharmacy* — Date

James R. Bardsley, Ph.D. — 11-8-06
*Associate Vice President for Finance and Planning, University of Utah Health Sciences Center* — Date

Tami S. Cleveland, *Campus Development Planner, Facilities Planning* — 11.07.06 Date

Cory D. Higgins, *Director, Plant Operations* — 11/07/06 Date

Joseph R. Harman P.E., *Campus Design & Construction* — 11/07/06 Date

Randall K. Funk, *Director, Campus Design & Construction* — 11.07.06 Date

Michael G. Perez, *Associate Vice President, Facilities Management* — 11-8-06 Date

Arnold B. Combe, *Vice President, Administrative Services* — 11/15/06 Date

## DIVISION OF FACILITIES CONSTRUCTION & MANAGEMENT, STATE OF UTAH

I have reviewed the College of Pharmacy Master Plan, jointly prepared with the University, for approval.

Lyle Knudsen, *DFCM Project Manager* — 11.16.06 Date

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## ACKNOWLEDGEMENTS

| | |
|---|---|
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| **Steering Committee:** | James Bardsley<br>John Mauger<br>Steve Panish<br>Art Broom<br>Diana Brixner<br>Barabara Crouch<br>Bill Crowley<br>Bruce Gillars<br>David Grainger<br>Chris M. Ireland<br>Steve Kern<br>David Maher<br>Bill McCreary<br>Mark Munger<br>Wayne Peay |
| **DFCM:** | Lyle Knudsen |
| **Campus Design & Construction:** | Randall Funk<br>Joe Harman |
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| **Design Team:** | Peter Emerson, EDA<br>Mark Whiteley, nbbj<br>Stephanie McCarthy, EDA |

## EXECUTIVE SUMMARY

### The Scientific Challenge

***"For the past thirty years, the College of Pharmacy has been nationally ranked among the top tier colleges for NIH-funded research. Further, the College's graduate programs are recognized nationally and internationally for their excellence."***

The College's research efforts are spread over six buildings—four of which are separated by about a mile from the main HSC campus. Skaggs Hall, the "mother ship" of our enterprise, is now more than 40 years old, is seismically unsound, highly inefficient in design, and is outdated in providing for today's rapidly advancing research programs. It also has worrisome life-safety issues.

***"Recently completed reviews of each of the four departments by internal and external experts rated the need for a new building as the number one priority for the College."***

This document is the College of Pharmacy's first step in realizing new facilities that will assist them in achieving their strategic vision to achieve even higher levels of translational science and graduate education.

***"Bringing the faculty and students within the College into proximity for greater program coherence and collegiality, and bringing interdisciplinary programs together to enhance the opportunities to address important research themes."***

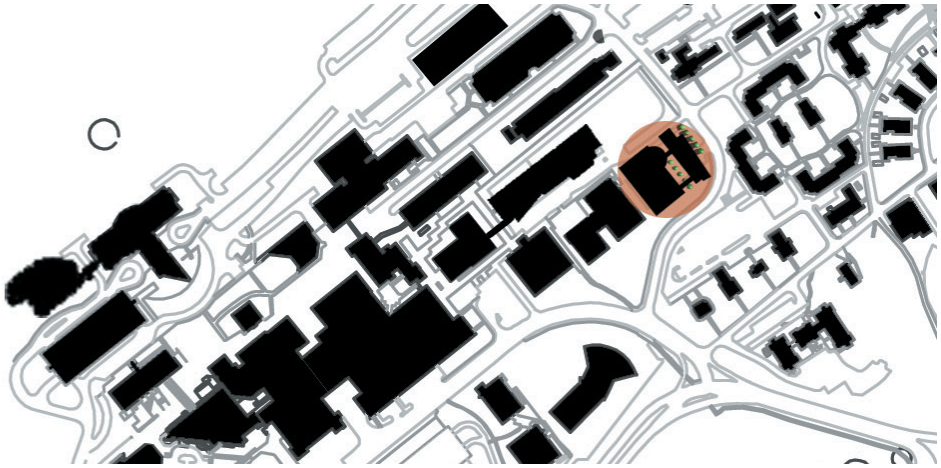



**Diagram 1: UofU Health Sciences Precinct plan (not to scale)**

### The Campus Challenge

The University of Utah Long Range Development Plan encapsulates a vision for future development in the Health Sciences precinct to:

**resolve the *"continuing challenge of accommodating new and growing programs, and to bring greater organizational clarity to the buildings and open spaces so they are more welcoming for visitors, patients and staff."***

Located at the southern termination of the Health Sciences pedestrian corridor, the site chosen for the new College of Pharmacy Building provides the opportunity to significantly enhance the image and identity of the Health Sciences precinct; to strengthen the existing campus pedestrian, vehicular and service networks; and to provide exciting internal and external spaces that revitalize human experience and encourage wider medical and scientific interaction.

During the first half of 2006, the design team of EDA/nbbj partnered with the project Steering Committee to understand the scientific and campus challenges and to explore opportunities to create a vision for the project. Through visioning sessions, comparative facilities review, site analysis (including an overview of existing infrastructure) and space analysis exercises, a series of master plan options for a new College of Pharmacy building were evaluated. This document describes the resulting chosen master plan design and the attributes that will form the basis for funding, future programming and detailed design.

## Recommendations

The design of the new College of Pharmacy Building seeks to bring organizational clarity to the southeastern end of the Health Sciences pedestrian corridor and to act as a catalyst for future redevelopment of the southwestern edge of the Health Sciences precinct by the incorporation of the following features:

- **Gateway Plaza:** Raising and lightening the mass of the South Eastern portion of the building creates a suitably scaled arrival / departure plaza at the end of the pedestrian corridor. Development of the adjacent vacant site to the northeast connection to the College of Pharmacy Building using these massing / landscaped principles will emphasize the point of termination.

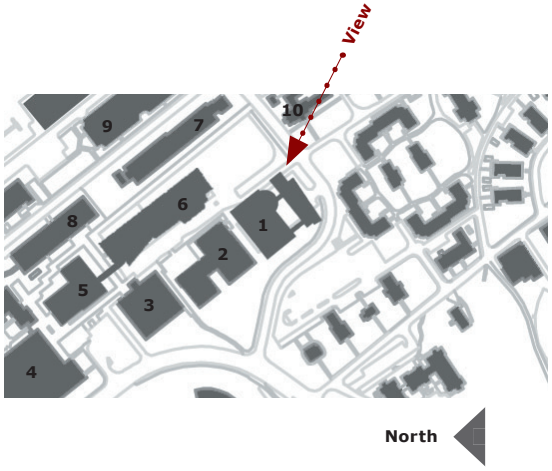
- **Route Emphasis:** The main mass of the building is set directly adjacent to the pedestrian corridor. This serves to strengthen the route, and to reinforce the public spaces to the northwest and southeast.

- **Landscape:** Setting the building back from the southeastern site boundary not only enables the landscape to contribute to this sense of place, but also serves to extend and enhance the landscape corridor identified in the Long Range Development Plan.

- **Campus Definition:** Aligning the southwestern façade of the new building with the adjacent Skaggs Building and College of Nursing serves to strengthen this edge of the Health Science precinct and set the precedent for development of these sites in the future.


**Diagram 2: Aerial View of Health Sciences Precinct**

1. Proposed College of Pharmacy Facility
2. LS Skaggs Pharmacy
3. School of Nursing Building
4. School of Medicine
5. Eccles Health Sciences Library
6. Eccles Health Sciences Education
7. Biomedical Polymers Research
8. Eccles Institute of Human Genetics
9. Health Sciences Parking Center
10. Research Administration Building



### Site Development Potential

The building elements have been positioned to maximize site development potential in the following ways:

- **Utilities Corridor:** A space has been identified for a utilities corridor between the northeastern site boundary and the southeastern façade of the existing Skaggs Building.

- **Site Amenity:** Creating external and internal public spaces on the site which achieve a balance between over development and under utilization.

- **Site Expansion:** The bar building located along the southeastern edge of the facility is designed to enable the easiest possible extension to the site to the northeast for College of Pharmacy or other Health Sciences expansion.

### College of Pharmacy Vision

The design of the new building incorporates the following features that aim to set up a flexible starting point for future programming and design development. It also sets the stage of outlining the attributes considered necessary by the College to achieve its vision for remaining at the forefront of interdisciplinary translational medical research.

- **Floor Plates:** Large scale flexible footprints with proportions that can be adapted to the various types of Life Sciences likely to be undertaken by the College in the future.

- **Natural Light:** A massing approach that maximizes natural light into the interior of the building.

- **Views:** A massing approach that maximizes views out of the new building, but also retains and enhances view corridors from the existing Health Sciences Education Building, Biopolymers and other adjacent buildings.


**Diagram 3:**
**Aerial View of proposed College of Pharmacy facility**

1. Proposed College of Pharmacy Facility
2. LS Skaggs Pharmacy
3. School of Nursing Building
4. Eccles Health Sciences Education

- **Efficiency:** Maximizing available space for scientific use and minimizing unused statement spaces, while at the same time creating opportunities for high quality interaction and collaboration of various scales and types throughout the building.

## SITE ANALYSIS .1

The site originally designated for the new College of Pharmacy Facility is located at the southwest corner of the Health Sciences District on the University of Utah Campus. The site is bound to the northeast by the existing L.S. Skaggs Pharmacy Building, to the southeast by the Health Sciences District pedestrian corridor, to the southwest by Medical Drive South, and to the Northwest by an existing swath of green space and ultimately Medical Drive South.


**Diagram 1.1: Campus Plan of the University of Utah**

Health Sciences District

Proposed Site

**Site Capacity**

The "build-to" parameters of the site are defined by the following requirements:

1. *Northwestern edge* – the face of the building shall be held a minimum of 40' off the face of the existing L.S. Skaggs Pharmacy Building (**1**) per IBC.

2. *Northeastern edge* – the northeastern face of the proposed building shall align with the northeastern face of the Nursing Building (**2**) while simultaneously maintaining the line of sight from the housing district (**3**) to (and through) the Health Sciences Corridor.

3. *Southeastern edge* – the building shall be held back from the face of curb such a distance so as not to interfere with the lines of sight along Medical Drive South. A distance of 30' off face of curb was approved by Facilities Planning.

4. *Southwestern edge* – the face of the new building shall align with the existing face of the retaining wall of the L.S. Skaggs Pharmacy Building immediately adjacent to the site therefore reinforcing the formal linear edge of the surrounding Health Sciences District which presents itself to the Lower University Campus and Salt Lake Valley below.

The site parameters outlined above result in a site footprint of 41,000 s.f.

It is interesting to note following:

1.) The swath of land located to the southeast of the HSEB (**4**), while potentially too small to be considered for the development of a free standing building, could be utilized by the College of Pharmacy Building for future expansion.

2.) The Long Range Development Plan for the University of Utah, 2003, appears to suggest that the formal, linear edge of the Health Sciences District be extended to align with the southwestern face of the University Hospital Parking Terrace, ultimately encroaching on 1900 East. This divergence from the existing southwestern boundary of the Health Sciences District brings into question the sanctity of the linear character of the existing edge. Could future development within the district extend beyond the newly delineated boundary? If yes, development of the amorphic green space adjacent to the site should be considered. This opportunity for expansion could be broadened with the realignment of Medical Drive South, i.e., the extension of the afore mentioned amorphic green space site extension to the south and west, resulting in a larger site footprint, not only for the new Pharmacy Facility, but also for future projects along the northwestern edge of the precinct.

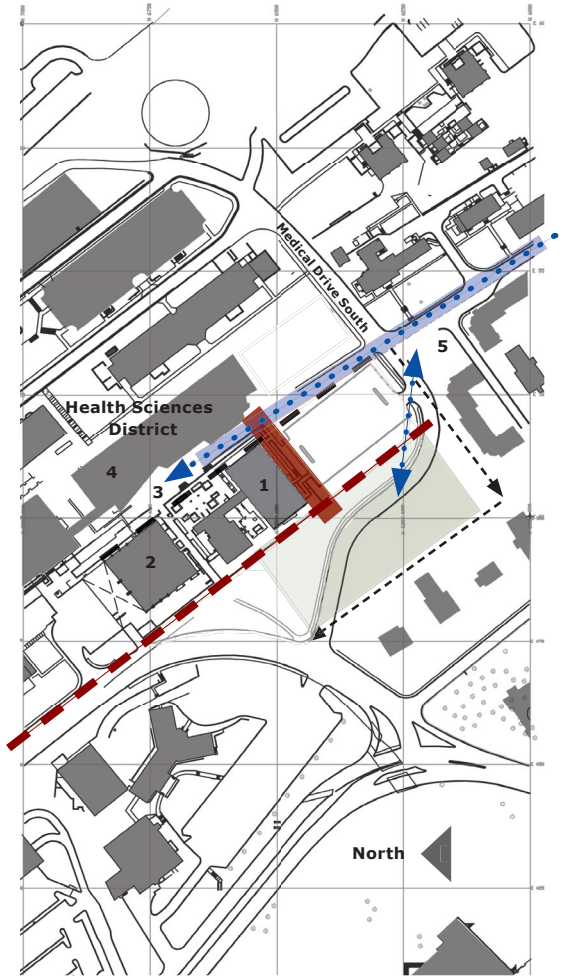



**Diagram 1.2: Proposed Site Boundaries**

Formal Edge
40' Off-Set
Line of Sight
View Corridor
Potential Road Realignment
41,000 s.f. Footprint
Site Extension Zone
Site Extension Zone
**1** L.S.Skaggs Building
**2** Nursing Building
**3** Health Sciences Corridor
**4** HSEB
**5** Housing District

**Existing Utilities**

The project design team met with members of Campus Design & Construction and Facilities Management to review the capacities of the existing utilities infrastructure in the vicinity of the Health Sciences District and the impact of a new College of Pharmacy facility. At that time, the team determined that the majority of the current utilities network (CW, HTW, SS, SD, and Gas) could handle the introduction of a new research and administration building of up to 225,000 square feet in size (see Appendix for Utilities Coordination Meeting Minutes dated 1.19.'06).

It is important to note that the Red Butte substation will be unable to handle any additional electrical load once the West Pavilion addition to the University of Utah Hospital and Huntsman III are complete. While this power capacity issue will need to be addressed and resolved on a global basis relative to the Health Sciences Corridor, the budget for the new Pharmacy facility should include an allowance to contribute to the upgrade of the substation.

Several existing utility lines running through and along the perimeter of the site will be impacted by the construction of the new facility. These lines will most likely need to be relocated. The new building should consider incorporating utility tunnels along the northwest and southwest edges of the new parking structure to facilitate access for maintenance and logical expansion routes for future building projects along the Health Sciences Corridor.

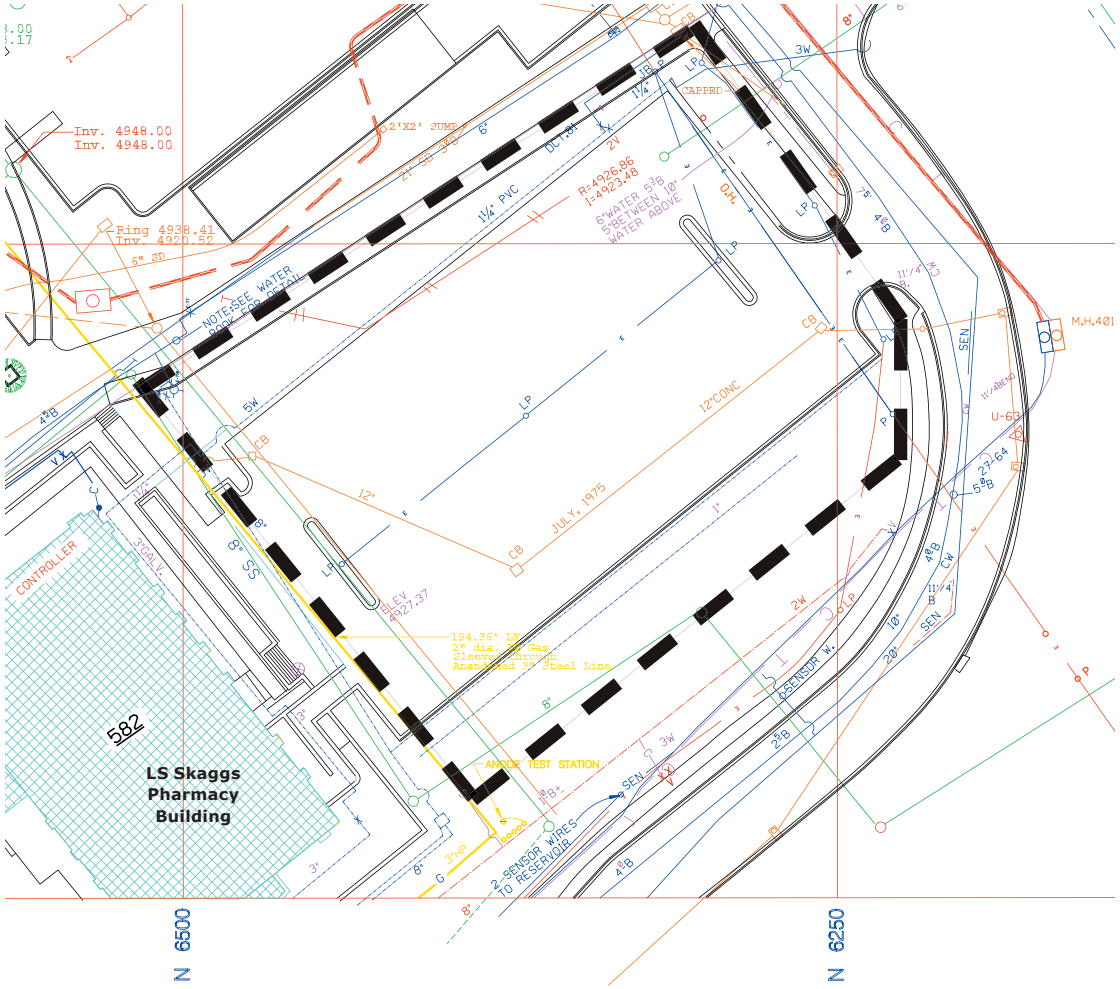



**Diagram 1.3: Existing Site Utilities Plan**

North

**Opportunity and Constraints**

The University of Utah's 2003 Long Range Development Plan outlines strategies to "moderate the otherwise increasing density" of the Health Sciences District, to resolve the "continuing challenge of accommodating new and growing programs, and to bring greater organizational clarity to the buildings and open spaces so they are more welcoming to visitors, patients and staff." The resulting conceptual diagram for the precinct seeks to address these issues by developing an urban network grounded in the articulation of physical and visual access, edges, gateways, anchors, and structured open space while simultaneously integrating into the campus wide network of vehicular and pedestrian circulation routes and open space.

Located at the southwest corner of the Health Sciences Corridor, the site for the new College of Pharmacy Building offers many opportunities to implement the strategies outlined in the Long Range Development Plan and inform future development along northwestern edge of the district.


**Diagram 1.4: Diagrammatic Representation University of Utah Long Range Development Plan, 2003**

**Access:**

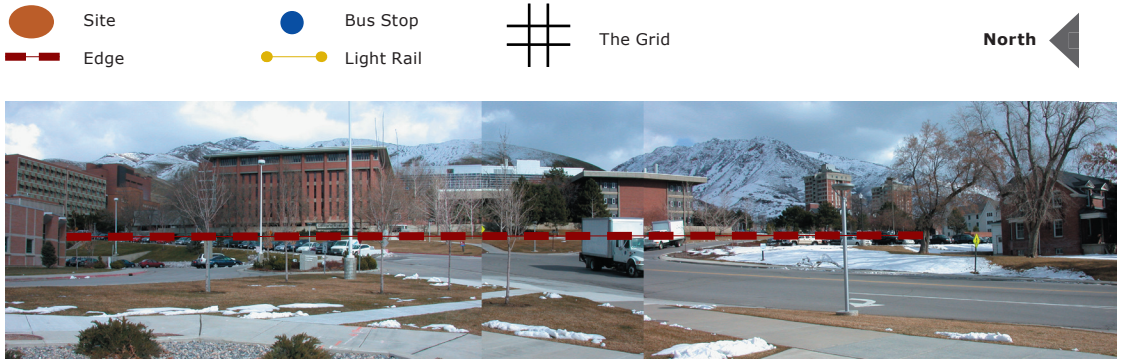
*Approach...*An existing campus wide system of roads, light rail and pedestrian paths facilitate access to the Health Sciences Precinct via private vehicles, public transportation, bicycle and foot. The Long Range Development Plan calls for the light rail, bicycle and pedestrian networks to be further integrated into and through the Health Sciences Corridor and adjacent open space.

*The Grid...*A grid defines the structure of the Health Sciences District's dense urban fabric. This network of interior streets, primarily pedestrian and service oriented, provide physical and visual connections to, through and across the Health Sciences Education Corridor.

**Edge:**

In addition to its visual prominence from the immediately adjacent upper campus fabric, the perimeter of the Health Sciences District is distinguishable from the Salt Lake Valley and various points throughout lower campus and Research Park. The monolithic character of the Health Sciences precinct is achieved through the careful orchestration of topography and the aggregation of building facades along its Northwestern edge. The aesthetic expression of the new Pharmacy Facility, therefore, provides an opportunity to reinforce the architectural identity of the area on multiple scales--College, Precinct, Campus and Regional--through the thoughtful articulation of the structures massing, elevations, materiality and surrounding open space.

**Diagram 1.5: Access**



**Gateway:** Given its prominent location at the southwest corner of the primary pedestrian path within the Health Sciences precinct, the new Pharmacy Facility will serve not only as a physical gateway to the corridor, but also a visual identity marker for those approaching the district along Medical Drive South and from the housing quarter immediately adjacent southwestern edge of the site.

**Point of Termination:** Once within the "walls" of the Health Sciences Education Corridor, the new Pharmacy Facility will no longer define a point of entry, but rather the visual and physical termination, of the district at its southwestern perimeter.

**Structured Open Space:** While the open space currently located along the Health Sciences Education Corridor provides relief from the densely developed grid, it is often physically disconnected from the minimally articulated pedestrian street that runs between the existing L.S. Skaggs Pharmacy Building and the Health Sciences Education Building. This vertical separation of path and place presents a challenge in the development of an integrated, pedestrian friendly spatial network. Future development along the Education Corridor should consider clearly defined circulation routes peppered with strategically located open space that foster a strong sense of identity and interdisciplinary interaction from the College and Health Sciences level to the Campus and Regional Scale.

**Diagram 1.6a: View to HS Education Corridor from housing quarter**

Gateway

**Diagram 1.6b: View to HS Education Corridor from housing quarter**

Gateway

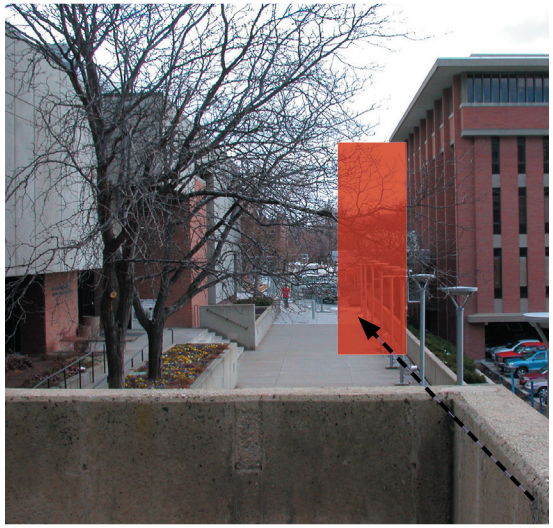


**Diagram 1.6c: View to HS Education Corridor from School of Medicine**

Point of Termination

**Diagram 1.6d: View to HS Education Corridor from School of Medicine**

Point of Termination

North

## SPACE ANALYSIS .2

This section provides analysis and commentary on the functional use of the available area for the new College of Pharmacy Building. As precursor to full programming, the aim of this analysis was to:

1. Assess the College's existing space allocations and develop target area parameters for the new building.

2. Develop a typical building module based on these parameters, test it against other similar facilities and assess its flexibility for future programming of the various types of science the College plans to undertake in the future.

3. Build a model of the overall building space allocations to be used as the basis for building population, the cost model and for future programming.

The Space analysis was undertaken based on the following information:

- **College of Pharmacy Capital Budget Estimate (CBE FY08)** which identified a total approved area for this project of 150,000 gross square feet

- **College of Pharmacy Strategic Plan which** identified the detailed requirements of the College of Pharmacy on a department by department basis

**COST / AREA BENCHMARKS**
*University of Utah College of Pharmacy*

nbbj

| | Researchers per PI | Offices | Bench Lab | Support | Tertiary | NSF / PI Lab&Support | NSF / PI Overall | |
|---|---|---|---|---|---|---|---|---|
| | | Lab & Support/Researcher | | | | | | |
| **NBBJ Database Benchmarks** | | | | | | | | |
| NBBJ | 12 | 24% | 29% | 27% | 20% | | | 56% |
| Med. Res. Average | | 600 | 792 | 726 | 530 | **1,518** | 2,648 | |
| | | | **127** | | | | | |
| NBBJ | 10 | 20% | 35% | 28% | 17% | | | 63% |
| Chemistry Average | | 600 | 1,056 | 844 | 520 | **1,900** | 3,020 | |
| | | | **190** | | | | | |
| Wellcome Trust | 12 | 30% | 45% | 22% | 3% | | | 67% |
| Genome Campus | | 605 | 919 | 451 | 61 | **1,370** | 2,036 | |
| | | | **114** | | | | | |
| Kings College | 10 | 32% | 25% | 26% | 18% | | | 50% |
| London / CCIB | | 665 | 512 | 530 | 366 | **1,042** | 2,073 | |
| | | | **104** | | | | | |
| **UCSF - Genentech Hall / Building 24** | | | | | | | | |
| Computational | 14 | 28% | 31% | 21% | 20% | | | 52% |
| Biology | | 616 | 682 | 462 | 440 | **1,144** | 2,200 | |
| | | | **82** | | | | | |
| Chemistry | 14 | 22% | 27% | 35% | 16% | | | 62% |
| | | 858 | 1,053 | 1,365 | 624 | **2,418** | 3,900 | |
| | | | **173** | | | | | |
| Biochemistry | 14 | 22% | 12% | 51% | 15% | | | 63% |
| | | 739 | 403 | 1,714 | 504 | **2,117** | 3,360 | |
| | | | **151** | | | | | |
| Molecular / Cellular | 14 | 22% | 24% | 39% | 15% | | | 63% |
| | | 737 | 804 | 1,307 | 503 | **2,111** | 3,350 | |
| | | | **151** | | | | | |
| **College Of Pharmacy Existing Facilities** | | | | | | | | |
| Medicinal Chemistry | 7 | | 1481 | | | **1,481** | | |
| | | | **212** | | | | | |
| Pharmaceutics | 10 | | 1848 | | | **1,848** | | |
| | | | **179** | | | | | |
| Pharm. Tox | 4 | | 913 | | | **913** | | |
| | | | **218** | | | | | |
| Average | 6 | | 1203 | | | **1,203** | | |
| | | | **201** | | | | | |
| **College Of Pharmacy Proposed Breakdown** | | | | | | | | |
| Proposed | 6 | 22% | 42% | 16% | 20% | | | 58% |
| | | 461 | 870 | 333 | 410 | **1,203** | 2,074 | |
| | | | **201** | | | | | |

**Diagram 2.1: Cost/Area Benchmarks**

## 1. Target Area Parameters

The College of Pharmacy undertook a detailed analysis of its existing facilities and documented a series of key area parameters for each of their departments in their Strategic Plan. The average of this departmental data, to be used in the space analysis was as follows:

- 6 researchers per principal investigator
- 1203 net square feet of lab and lab support per principal investigator
- 201 net square feet of lab and lab support per researcher, broken down into 150 square feet for bench labs and 51 square feet for laboratory support

## 2. Typical Laboratory Module

On the basis of the key area parameters outlined above, and using NBBJ's peer facility data base the typical building module shown in figure 2.2 was developed. This building module identified an average area allocation per principal investigator for offices, bench laboratory, laboratory support, administrative facilities and balance areas such as stairs, elevators and internal MEP spaces. The total of all these areas produced a gross area per researcher of 2560 square feet.

**Building Space / Cost Model**
***University of Utah College of Pharmacy***

nbbj

| | | | |
|---|---|---|---|
| **COST** | | | |
| Construction Cost | | | **$49,950,000** |
| Minus Parking | | | $6,000,000 |
| Laboratory Construction Value | | | **$43,950,000** |
| | | | |
| **AREA** | | | |
| Cost/sqft @ 2006 price* | | $293 | |
| Total Gross Area | | | 150,000 |
| Net/Gross | 1.54 | 65% | |
| **Net Internal Area** | | | **97,500** |
| Total Gross Area | | | 150,000 |
| Mechanical Rooms (%of Gross) | 20% | | 30,000 |
| **Remaining Gross Internal Area** | | | **120,000** |
| | 5 fls | | 24,000 |

**Laboratory Areas Space Standards**

| Space standards | % of Gross Internal Area | % of Net Internal Area | Area |
|---|---|---|---|
| Balance | 19% | | 22,500 |
| **Net Internal area** | | | **97,500** |
| Animal Facility* | | | 5000 |
| **Remaining net internal area** | | | **92,500** |
| Primary - Offices | 18% | 22% | 20,546 |
| Primary - Labs | 34% | 42% | 38,809 |
| Secondary - Lab Support / Core | 13% | 16% | 14,839 |
| Tertiary - Technical Support | 16% | 20% | 18,263 |
| | **100%** | **100%** | |

**Approximation of Staff**

| Number of Staff | Target Parameter | No. Of Staff |
|---|---|---|
| Total Faculty per Primary+Secondary Labs | 1,203 | 45 |
| Total Primary Lab space per researcher | 150 | 259 |
| Primary plus Secondary space per researcher | 201 | 268 |

| Staff Summary | No. Of Staff |
|---|---|
| **Total Faculty** | **45** |
| Total research staff | 268 |
| Research Staff / PI | 6 |

**The cost/s.f. breaks out as follows: 145,000 s.f. @ $291/s.f. 5,000 s.f. @ $356/s.f. (Animal Facilities)*

*Note: Costs illustrated in this chart are rounded, see "Order of Magnitude of Costs.4"in this document for more detailed information*

**Diagram 2.2: Building Space / Cost Model**

**Benchmark Analysis**
The typical laboratory module was then bench marked against NBBJ's peer facility data base. (figure 2.1) The following observations were made:

- The proposed area of lab and lab support / researcher at 201 square feet was higher than the peer facilities, while the number of researchers per principal investigator was lower. This provides the college with the flexibility to incorporate future growth in the numbers of post grad / post doc researchers. It also provides flexibility to incorporate a higher level of instrumentation or fume hoods in the laboratory areas, typical of more intensely chemical research.

- The net lab and lab support area per principal investigator was lower than the peer facilities. This was deemed acceptable after understanding that the incorporation of pharmacotherapy, a more office based organization, into the building would result in a higher lab area for the remaining principal investigators.

- The ratio of primary and secondary lab space to office and other tertiary administrative / building support spaces was between that which would normally be expected for biology and that for chemistry. Again, this was deemed acceptable after understanding the incorporation of pharmacotherapy in more detailed programming would raise this to a level more commonly associated with chemistry research.

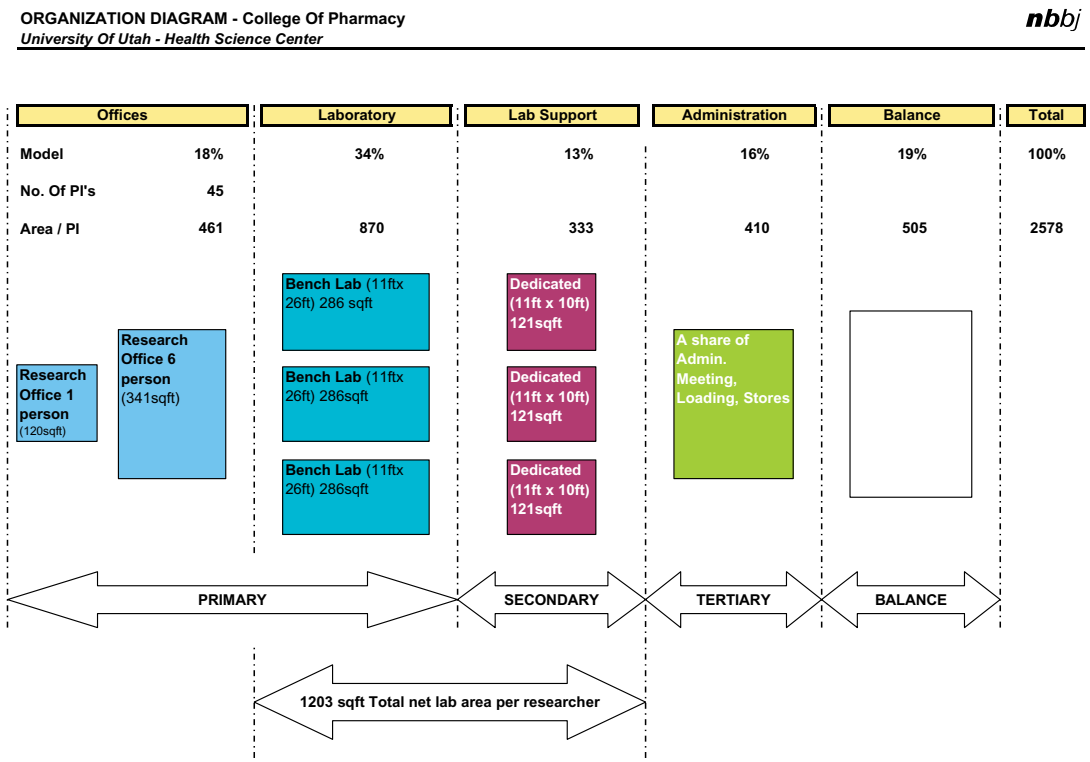



**Diagram 2.3: Organization Diagram**

### 3. Building Space / Cost Model

Figure (2.2) shows the top down analysis into which the bench marked target area parameters and the building module were incorporated. The 150,000 gross square feet identified in the Capital Budget Estimate provided a gross internal area of 120,000 square feet, which at 65% efficiency provided an overall net internal area of 97,500 square feet.

An allowance of 5000 net square feet for an animal facility was then deducted from the overall net internal area to arrive at a remaining net internal area of 92,500 square feet. Using the target area parameters a total number of 45 principal investigators with 268 research staff were derived as the target population for the building.

**Future Programming Considerations:**

In developing the typical building module, discussions with College Faculty identified a number of facilities that were considered important in achieving the vision of the College of Pharmacy. The flexibility built into the typical building module will allow these "sacred cows" to be considered when assembling a future detailed program.

**Faculty Lounge** – or other collaboration spaces where interaction between disciplines can be encouraged at a variety of formal and informal levels

**Dispensing Lab and Dispensing Pharmacy –** Possibly publicly accessible these facilities will enable the bench to truly meet the bedside by providing hands on training and community contact.

**Clinical Trials Suite –** To further the college vision for translational medical research this facility could be operated on an outpatient basis.

**Computer Visualization and Informatics** – Faculty saw an increase in the growth of digital research techniques and virtual reality. Facilities could be provided as some form of specific space or by providing flexibility within laboratory areas that enable easy adaptation to rapidly advancing technology.

**Specialist Support Spaces** – either directly related to specific laboratories or set up as a multi-user core facility faculty identified clean room space, instrumentation rooms and a hot lab. Imaging, microscopy and MR/CT facilities however were not considered essential as these will be provided elsewhere.

**Lecture Theater** - Currently, the 300 seat facility located in the existing L.S. Skaggs Pharmacy services the needs of the College and the School of Health Sciences. It will be maintained in its existing location for the purposes of continued shared use.

## MASTER PLAN AND CONCEPTUAL RENDERINGS .3

### Design Narrative

The development of the master plan for the new College of Pharmacy Building was driven at a campus scale by the requirements of the University of Utah 2003 Long Range Development Plan (LRDP). The LRDP sets out a series of campus design attributes that were developed at a site scale to inform the massing and disposition of building elements on the site. These design attributes were developed in parallel with the need to maximize the best use of the site capacity and enable connectivity for future expansion to adjacent sites. The final design driver was to create innovative and flexible facilities that will enable the College of Pharmacy to achieve its strategic vision and goals.

### Design Attributes

The design of the new College of Pharmacy Building seeks to bring organizational clarity to the South Eastern end of the Health Sciences pedestrian corridor and to act as a catalyst for future redevelopment of the South Western edge of the Health Sciences precinct by the incorporation of the following features:

- **Gateway Plaza:** Raising and lightening the mass of the South Eastern portion of the building creates a suitably scaled arrival / departure plaza at the end of the pedestrian corridor. Development of the adjacent vacant site to the north east and connection to the College of Pharmacy building using these massing / landscape principles will emphasize this point of termination.


**Diagram 3.1: Aerial View of Health Sciences Precinct**

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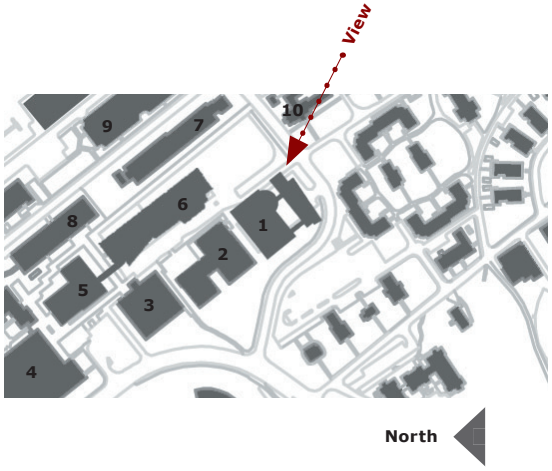
10. Research Administration Building



- **Route Emphasis:** The main mass of the building is set directly adjacent to the pedestrian corridor. This serves to strengthen the route, and to reinforce the public spaces to the Northwest and Southeast.
- **Landscape:** Setting the building back from the Southeastern site boundary not only enables the landscape to contribute to this sense of place, but also serves to extend and enhance the landscape corridor identified in the Long Range Development Plan.
- **Campus Definition:** Aligning the Southwestern façade of the new building with the adjacent Skaggs Building and College of Nursing serves to strengthen this edge of the Health Sciences precinct and set the precedent for development of these sites in the future

**Site Development Potential**
The building elements have been positioned to maximize site development potential in the following ways:

- **Utilities Corridor:** A space has been maintaining for a utilities corridor between the North Eastern site boundary and the South Eastern façade of the existing Skaggs building.
- **Site Amenity:** Creating external and internal public spaces on the site which achieve a balance between over development and under utilization.
- **Site Expansion:** The bar building located along the Southeastern edge of the facility is designed to enable the easiest possible extension to the site to the Northeast for College of Pharmacy or other Health Sciences expansion.

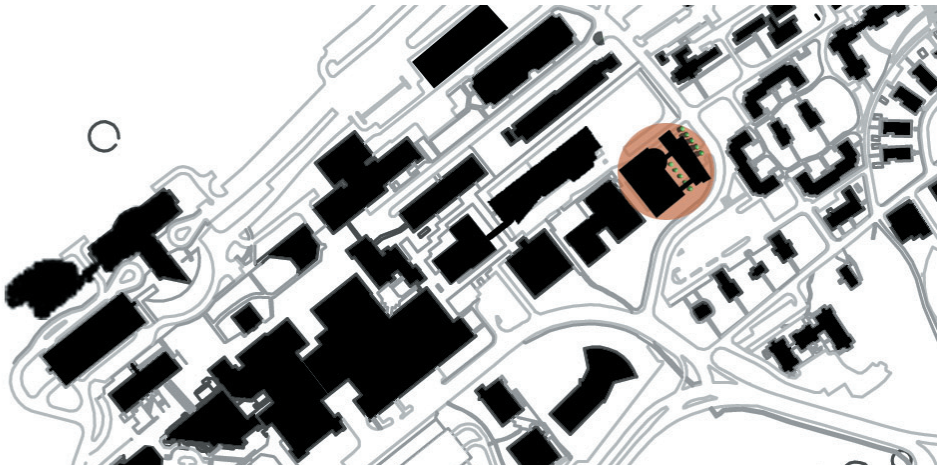


**Diagram 3.2a: UofU College of Pharmacy proposed facility plan (not to scale)**

North

**Diagram 3.2b: UofU College of Pharmacy proposed facility expansion plan (not to scale)**

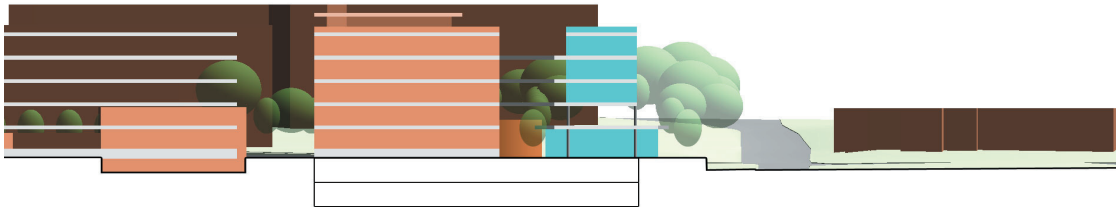


**Diagram 3.2c: UofU College of Pharmacy proposed facility section (view to the west, not to scale)**

**College of Pharmacy Vision**

The design of the new building incorporates the following features that aim to set up a flexible starting point for future programming and design development. It also sets the stage by outlining the attributes considered necessary by the College to achieve its vision for remaining at the forefront of interdisciplinary translational medical research.

- **Floor Plates:** Large scale flexible footprints with proportions that can be adapted to the various types of Life Sciences likely to be undertaken by the College in the future.
- **Natural light:** A massing approach that maximizes natural light into the interior of the building
- **Views:** A massing approach that maximizes views out of the new building, but also retains and enhances view corridors from the existing Health Sciences Education Building, Biopolymers and other adjacent buildings
- **Efficiency:** Maximizing available space for scientific use and minimizing unused statement spaces, while at the same time creating opportunities for high quality interaction and collaboration of various scales and types throughout the building.


**Diagram 3.3:**
**Aerial View of proposed College of Pharmacy facility**

1. Proposed College of Pharmacy Facility
2. LS Skaggs Pharmacy
3. School of Nursing Building
4. Eccles Health Sciences Education

ORDER OF MAGNITUDE COSTS .4

**Capital Development Projects, Capital Budget Estimate (CBE)**

| | |
|---|---|
| **Project Name:** | College of Pharmacy |
| **Agency/Institution:** | The University of Utah |
| **Project Manager:** | Joseph Harman |

| **Cost Summary** | **$ Amount** | **Cost Per SF** | **Notes** |
|---|---|---|---|
| Facility Cost | $ 72,464,988 | $483.10 | |
| Additional Construction Cost | $ 1,426,731 | $9.52 | |
| Underground Parking Structure | $ 8,061,644 | $53.75 | |
| Site Cost | $ 2,127,522 | $14.18 | |
| High Performance Building | $ 1,471,415 | $9.81 | |
| **Total Construction Cost** | **$ 84,080,885** | **$560.54** | |
| | | | |
| **Soft Costs:** | | | |
| Hazardous Materials | $ - | | |
| Pre-Design/Planning | $ 886,189 | | |
| Design | $ 8,700,782 | | |
| Property Acquisition | $ - | | |
| Furnishings & Equipment | $ 7,744,622 | | |
| Information Technology: | $ 1,283,285 | | |
| Utah Art (1% of Construction Budget) | $ 855,523 | | |
| Testing & Inspection | $ 846,968 | | |
| Contingency | $ 4,046,163 | | |
| Moving/Occupancy | $ 213,881 | | |
| Builder's Risk Insurance (0.15% of Construction Budget) | $ 126,121 | | |
| Legal Services (0.2% of Construction Budget) | $ 168,162 | | |
| DFCM Management | $ 1,711,046 | | |
| User Fees | $ - | | |
| Commissioning | $ 855,523 | | |
| Other Costs | $ 500,000 | | |
| **Total Soft Costs** | **$ 27,938,264** | **$186.26** | |
| | | | |
| **TOTAL PROJECT COST** | **$ 112,019,149** | **$746.79** | |
| | | | |
| **Previous Funding** | **$ -** | | |
| | | | |
| **Other Funding Sources** (Identify in note) | $ 112,019,149 | | |
| | | | |
| **REQUEST FOR STATE FUNDING** | **$ -** | | |

**Project Information**

| | | | |
|---|---|---|---|
| Gross Square Feet | 150,000 | Base Cost Date | 1-Sep-06 |
| Net Square Feet | - | Estimated Bid Date | 30-Sep-10 |
| Net/Gross Ratio | 0% | Est. Completion Date | 30-Jun-12 |
| | | Last Modified Date | 13-Sep-06 |
| | | Print Date | 11/2/2006 |

**Capital Budget Estimate Clarifications:**

1. The cost of the fixed equipment within the labs and the lab support areas is included in the "Facility Costs" of the Capital Budget Estimate.

2. The FF&E Costs identified in the Capital Budget Estimate include moveable equipment and furnishings.

3. A Building Security System allowance of $50,000 has been included in the "Facility Costs" of the Capital Budget Estimate.

4. A carpet allowance $38/square yard has been included in the "Facility Costs" of teh Capital Budget Estimate. This is an escalated allowance.

**Capital Development Projects, CBE Details**

| | | | | | |
|---|---|---|---|---|---|
| **Project Name:** | **College of Pharmacy** | | | | |
| **Agency/Institution:** | **The University of Utah** | | | | |
| **Project Manager:** | **Joseph Harman** | | | | |
| **Description** | **Explanation** | **Units** | **Unit Cost** | **Cost** | **Escalated Cost** |
| **Facility Cost** | | **GSF** | | | |
| **New Facility Cost Details:** | | | | | |
| | | 145,000 | 291.34 | $ 42,244,300 | $ 68,111,700 |
| | Animal Facility | 5,000 | 540.00 | $ 2,700,000 | $ 4,353,288 |
| | | - | | $ - | $ - |
| | | | | $ - | $ - |
| **Subtotal - New Facility Costs** | | **150,000** | | **$ 44,944,300** | **$ 72,464,988** |
| **Remodel Facility Cost Details:** | | | | | |
| | | | | $ - | $ - |
| **Subtotal - Remodel Facility Costs** | | **-** | | **$ -** | **$ -** |
| **TOTAL FACILITY COST** | | **150,000** | | **$ 44,944,300** | **$ 72,464,988** |
| **Additional Construction Cost Details:** | | | | | |
| | | | - | $ - | $ - |
| Pre-Construction Services | | 0.20% | $ 44,944,300 | $ 89,889 | $ 144,930 |
| Service Tunnel | | 300 | 2,650 | $ 795,000 | $ 1,281,801 |
| **TOTAL ADDITIONAL CONSTRUCTION COST** | | | | **$ 884,889** | **$ 1,426,731** |
| **Underground Parking Structure Details:** | | | | | |
| | | | - | $ - | $ - |
| Underground Parking Structure | | 200 | 25,000 | $ 5,000,000 | $ 8,061,644 |
| **TOTAL UNDERGROUND PARKING STRUCTURE COST** | | | | **$ 5,000,000** | **$ 8,061,644** |
| **Site Cost Details:** | | | | | |
| General Site Costs | | 1.00% | $ 81,953,363 | $ 819,534 | $ 1,321,358 |
| Partial Substation Upgrade | | 1 | $ 500,000 | $ 500,000 | $ 806,164 |
| | | - | - | $ - | $ - |
| | | | | $ - | $ - |
| | | | | $ - | $ - |
| | | | | $ - | $ - |
| **TOTAL SITE COST** | | | | **$ 1,319,534** | **$ 2,127,522** |
| **HIGH PERFORMANCE BUILDING** | If N/A, change YES to NO. To supercede 1-1/2% calculation enter amount in unit cost | **yes** | | **$ 912,603** | **$ 1,471,415** |
| **TOTAL CONSTRUCTION COST** | | | | **$ 52,148,722** | **$ 85,552,301** |

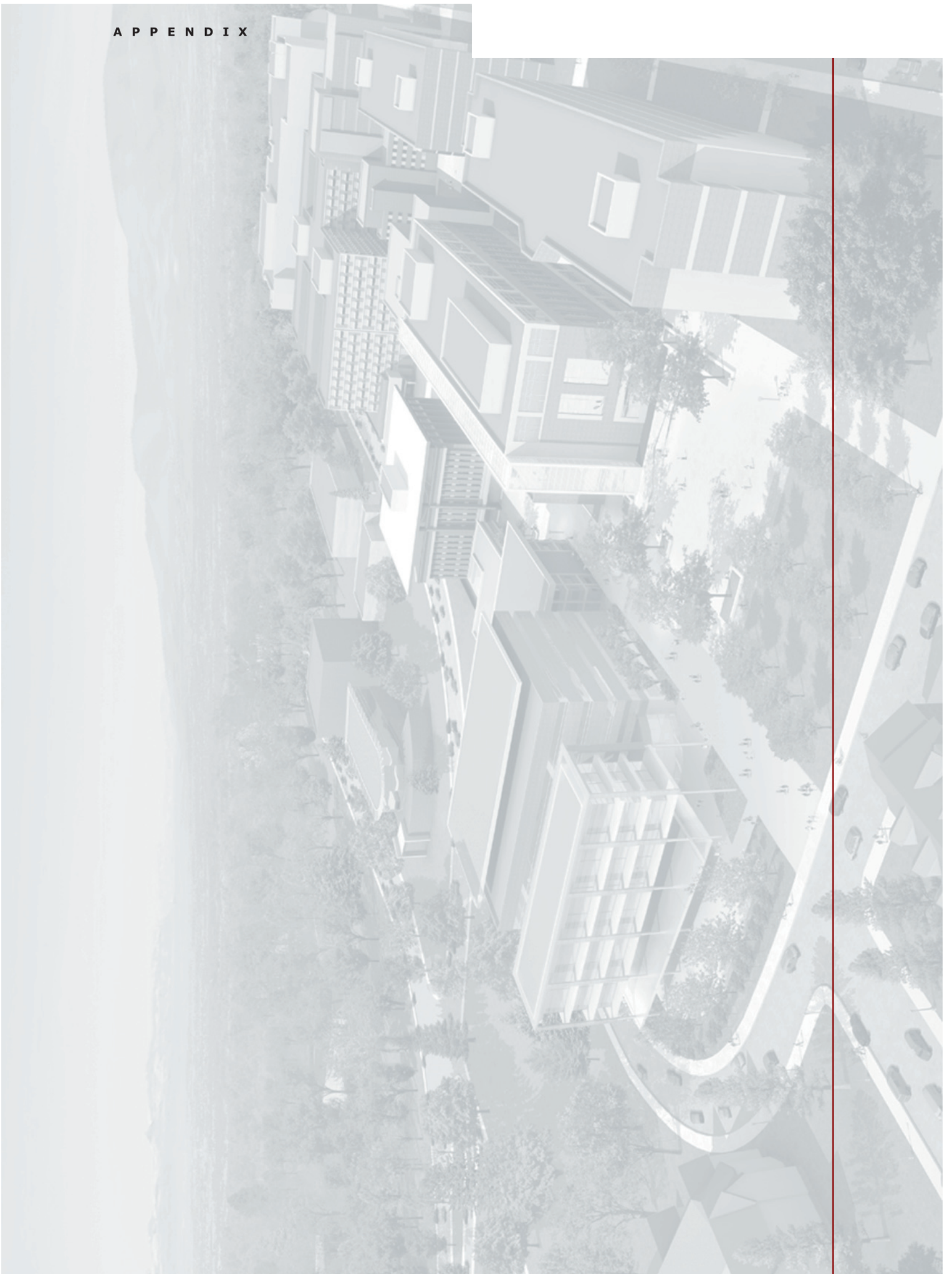
| | | | | | |
|---|---|---|---|---|---|
| **OTHER PROJECT INFORMATION:** | | | | | |
| **Total Net Square Feet:** | | | | | |
| **Base Cost Date:** | **9/1/2006** | | | | |
| **Estimated Bid Date:** | **9/30/2010** | | | | |
| **Estimated Completion Date:** | **6/30/2012** | | | | |
| **Last Modified Date:** | **9/13/2006** | | | | |
| **Inflation Escalation Factor Included:** | **15.00%** | | | | |
| **Location Factor Included:** | **0.00%** | | | | |
| | | | | | |
| **Hazardous Materials Cost Details:** | | | | | |
| **Pre-Construction Survey** | | 1 | $ - | $ - | $ - |
| | | | | $ - | $ - |
| **Plan and Monitoring** | | 1 | $ - | $ - | $ - |
| | | | | $ - | $ - |
| **Abatement/Removal** | | 0.00% | $ - | $ - | $ - |
| | | | | $ - | $ - |
| **TOTAL HAZARDOUS MATERIALS COST** | | | | **$ -** | **$ -** |
| | | | | | |
| **Pre-Design/Planning:** | | | | | |
| **Planning Fund Reimbursement** | | | $ - | $ - | |
| | | | | $ - | |
| **Programming** | | 1.00% | $ 85,552,300.51 | $ 855,523 | |
| | | | | $ - | |
| **Environmental Assessment** | | 0.00% | $ 85,552,300.51 | $ - | |
| | | | | $ - | |
| **Geotechnical Investigation/Surveys** | | 0.03% | $ 85,552,300.51 | $ 25,666 | |
| Utility Survey | Allowance | 1 | $ 5,000.00 | $ 5,000 | |
| **TOTAL PRE-DESIGN/PLANNING COST** | | | | **$ 886,189** | |
| | | | | | |
| **Design Costs:** | | | | | |
| **A/E Design Fees** | | | | | |
| | | 8.00% | $ 85,552,300.51 | $ 6,844,184 | |
| | | 2.00% | $ 85,552,300.51 | $ 1,711,046 | |

| | | | | | |
|---|---|---|---|---|---|
| | | | | $ - | |
| **Total A/E Design Fees** | | | | $ 8,555,230 | |
| | | | | | |
| **Additional Printing Costs** | | 150,000 | $ 0.40 | $ 60,000 | |
| **High Performance Design** | | | | **$ -** | |
| | | | | | |
| **Value Management Costs** | 0.1% of Escalated Construction Costs | 0.1% | $ 85,552,300.51 | $ 85,552 | |
| | | | | $ - | |
| **TOTAL DESIGN COST** | | | | **$ 8,700,782** | |
| | | | | | |
| **Property Acquisition:** | | | | | |
| | | | | $ - | |
| | | | | $ - | |
| | | | | $ - | |
| | | | | $ - | |
| **TOTAL PROPERTY ACQUISITION COST** | | | | **$ -** | |

| | | | | |
|---|---|---|---|---|
| **Furnishings & Equipment Costs:** | | | | |
| **Furnishings Detail:** | | | | |
| | | 8.50% | $ 85,552,301 | $ 7,271,946 |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| **Total Furnishings** | | | | $ 7,271,946 |
| | | | | |
| **Equipment Detail:** | | | | |
| | | 0.00% | $ 85,552,301 | $ - |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| **Total Equipment** | | | | $ - |
| | | | | |
| **FF&E Design Costs** | | 6.50% | $ 7,271,946 | $ 472,676 |
| | | | | $ - |
| **TOTAL FURNISHINGS & EQUIPMENT COSTS** | | | | **$ 7,744,622** |
| | | | | |
| **Information Technology Costs:** | | | | |
| | | 1.50% | $ 85,552,301 | $ 1,283,285 |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| **TOTAL INFORMATION TECHNOLOGY COST** | | | | **$ 1,283,285** |
| | | | | |
| **UTAH ART** | If N/A, change YES to NO. To supercede 1% calculation enter amount in unit cost | **YES** | | **$ 855,523** |
| | | | | |
| **Testing & Inspection Costs:** | | | | |
| **Building Code Inspection** | | 0.33% | $ 85,552,301 | $ 282,323 |
| | | | | $ - |
| **Material Testing** | | 0.33% | $ 85,552,301 | $ 282,323 |
| | | | | $ - |
| **Special Inspections** | | 0.33% | $ 85,552,301 | $ 282,323 |
| | | | | $ - |
| **TOTAL TESTING & iNSPECTION COSTS** | | | | **$ 846,968** |
| | | | | |
| **Moving/Occupance Costs:** | | | | |
| | | 0.25% | $ 85,552,301 | $ 213,881 |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |
| **TOTAL MOVING/OCCUPANCY COSTS** | | | | **$ 213,881** |
| | | | | |
| **DFCM Management:** | | | | |
| | | 2.00% | $ 85,552,301 | $ 1,711,046 |
| | | | | $ - |
| | | | | $ - |
| | | | | $ - |

| | | | | | |
|---|---|---|---|---|---|
| **TOTAL DFCM MANAGEMENT** | | | | **$** | **1,711,046** |
| | | | | | |
| **User Fees:** | | | | | |
| | | | | $ | - |
| | | | | $ | - |
| | | | | $ | - |
| | | | | $ | - |
| **TOTAL USER FEES** | | | | **$** | **-** |
| | | | | | |
| **Commissioning:** | | | | | |
| | | 1.00% | $ 85,552,301 | $ | 855,523 |
| | | 0 | | $ | - |
| | | | | $ | - |
| | | | | $ | - |
| **TOTAL COMMISSIONING COSTS** | | | | **$** | **855,523** |
| | | | | | |
| **Other Costs:** | | | | | |
| Energy Study | $5K if withing RMP area, $15K otherwise | | | $ | 5,000 |
| Lock Cylinders | % of Escalated Construction Cost | 0.30% | $ 85,552,301 | $ | 256,657 |
| Signage | | | | $ | 150,000 |
| Electric Terminations | | | | $ | 19,172 |
| Campus Work Orders | | | | $ | 19,171 |
| Utility Shutdowns | | | | $ | 50,000 |
| **TOTAL OTHER COSTS** | | | | **$** | **500,000** |
| | | | | | |
| **Previous Funding:** | | | | | |
| (Only show state appropriated funding & include costs covered by that funding in appropriate category.) | | | | | |
| | | | | $ | - |
| | | | | $ | - |
| **TOTAL PREVIOUS FUNDING** | | | | **$** | **-** |
| | | | | | |
| **Other Funding Sources:** | | | | | |
| (List and describe each source) | | | | | |
| FY '99-'00 Other Funds Approval | $35.5M | | | $ | 112,019,149 |
| FY '06-'07 Other Funds Approval | $31.8 M | | | $ | - |
| Total Approved | $67.3M | | | $ | - |
| | | | | $ | - |
| **TOTAL OTHER FUNDING SOURCES** | | | | **$** | **112,019,149** |

# APPENDIX



## STRATEGIC PLAN IN SUPPORT OF THE PHARMACY BUILDING MASTER PLAN 2006 .APP-1

This document is not intended to constitute a comprehensive strategic plan for the College of Pharmacy, because much of an overarching plan would be irrelevant to the issue at hand; i. e., planning for a new building to support the research mission of the College. Many of the mission-critical activities of the College, such as professional student instruction, development of externship-clerkship sites, continuing professional education, and service-learning experiences will not be conducted in the proposed structure.

For the past thirty years, the College of Pharmacy has been nationally ranked among the top tier colleges for NIH-funded research. Further, the College's graduate programs are recognized nationally and internationally for their excellence. To build on this established base of research and graduate education, we envision the College of Pharmacy becoming a leader in interdisciplinary and translational science in the Health Sciences Campus. In addition, we also envision the College's graduate and post-graduate programs as being areas of growth for the future. This overarching vision requires a new research building to sustain our record of academic excellence. A new, state-of-the art research facility will also enable us to achieve even higher levels of translational science and graduate education. The new building will be based on the principles of: 1) bringing the faculty and students within the College into proximity for greater program coherence and collegiality, and 2) bringing interdisciplinary programs together to enhance the opportunities to address important research themes. The fact that this new building will be built at the southern point of the education corridor will engender collaborations with programs housed in the Biomedical Polymers Research Building, the Eccles Human Genetics Building and the Dolores Doré Eccles Research Building.

The mission, vision and values statements of the College are attached as Appendix A. The educational and service activities are critical components of the overarching mission of the College, but do not relate directly to the need for a Pharmacy Research Building. The reason for this is the presence of the newly completed Health Sciences Education Building, located within a few yards of the site for the proposed new structure. This exceptional educational facility is enabling us to fully meet most of our didactic, class laboratory and distance education needs.

The vibrant research enterprise of the College does not enjoy a similar state-of-the-art facility. Indeed, the College's research efforts are spread over six buildings—four of which are in Research Park and are separated by about a mile from the main HSC campus. Skaggs Hall, the "mother ship" of our enterprise, is now more than 40 years old, is seismically unsound, is highly inefficient in design, and is outdated in providing for today's rapidly advancing research programs. In addition, Skaggs Hall has a number of worrisome life-safety issues. Recently completed reviews of each of the four departments by internal and external experts rated the need for a new building as the number one priority for the College.

This document will briefly examine the space needs of each department projected out for five years, by which time it is hoped that the new building will be ready for occupancy. The final section will summarize the needs for the entire College.

**Medicinal Chemistry**

The Graduate School's recently completed review of the Department of Medicinal Chemistry led to a number of noteworthy commendations. First, faculty members were commended for their research and scholarly accomplishments. Second, the faculty were affirmed for their commitment to the graduate and professional teaching missions of the University and those stated specifically by the Department. Third, the Graduate School commended the Department for its long-standing commitment to service on behalf of the College, the Health Sciences Center and the University. In addition to these important acclamations, a number of recommendations were made; those relevant to the new building will be described below.

Faculty recruitment is the highest single priority for the Department. Five senior faculty have left the Department in the last five years—four through full or phased retirement and one by relocation to another institution. These changes have placed a substantial burden on the Department in terms of maintaining its national stature as a leader in Medicinal Chemistry research and in fulfilling its teaching and service commitments to the University. Although the loss of well-funded senior faculty has been disruptive to the Department, it has presented the opportunity for renewal and re-invigoration. During the same five year period, three new Assistant Professors have been appointed, and a fourth has just accepted appointment at the advanced Assistant Professor level. Recruitment for a more senior faculty member is approved and planned for FY 08. These new hires will restore *status quo* to the Department, but planning is underway for the creation of one or two new faculty lines over the next 5-7 years. In addition to these tenured/tenure track faculty, the Department enjoys the active participation of five Research and Adjunct faculty, most of whom have directed the research of Medicinal Chemistry graduate students and one of whom is currently funded within the Department. Based on past hires, it is estimated that at least one additional PI level Research faculty member will be added within this time frame, bringing the total PI faculty to 12-14.

At its present staffing level, the Department employees some 62 individuals in various research roles, of whom about 24 are graduate students and 12 are postdoctoral fellows. With the modest expansion noted above, nine to ten regular and one or two funded Research faculty would direct the research of 30-35 graduate students and 15-20 postdocs, along with a number of research specialists, technicians and undergraduate assistants, assuming current ratios. However, it is the vision of the Department to use future hires to build stronger programmatic ties with other units in the College and the HSC. The discipline of Medicinal Chemistry has unique strengths in the area of chemical and computational biology, which are widely being recognized as essential intermediaries in translating basic chemical discoveries into clinically useful therapeutics. To this end, two Utah Centers of excellence and several spin-off companies have been created by Department faculty. Thus, the Department is particularly interested in recruiting faculty with research interests that may align with clinical development programs such as Pediatric Pharmacotherapy, the Huntsman Cancer Institute and the Brain Institute. There is also faculty interest in working with the new USTAR program in the recruitment of one or more major research groups in one of the programmatic areas identified for funding. However this effort plays out, it is likely that significant expansion of researchers beyond the numbers cited above will take place. Thus, in addition to the 12 to 14 faculty noted above, conservative planning suggests that these programmatic initiatives will add as many as four new tenure track and as many research track faculty to bring departmental totals to 20 to 22 PI level faculty

**Pharmaceutics and Pharmaceutical Chemistry**

The Department of Pharmaceutics is a national leader in the area of Pharmaceutics, especially in translational research in the area of drug delivery and in the newly emphasized field of bio-defense. This status was affirmed by Graduate Council Reviewers in their recent evaluation of the Department. Remarkably, four of the Department's twelve tenured/tenure track faculty are University Distinguished Professors. Additionally, one of these four has also been elected to both the Institute of Medicine of the National Academies and to the National Academy of Engineering. The newly appointed Department Chair, Dr. David Grainger, is the first holder of the George S. and Dolores Doré Eccles Foundation Presidential Endowed Chair.

The recent Graduate Council review lauded the Department for its overall excellence at the national and international levels and its leadership in graduate education. The 10 PI faculty currently supervise more than 40 graduate students along with a number of postdocs and lab assistants, bringing the total number of Department researchers to over 100. One of the first Utah Centers of Excellence, the Center for Controlled Chemical Delivery reports to the Department Chair. CCCD has a distinguished history and has been largely responsible for creation of the International Symposium in Recent Advances in Drug Delivery, a biennial meeting held in Salt Lake City. In keeping with the University's interest in the commercialization of inventions, Department faculty have patented numerous inventions and have started a large number of companies in University Research Park and elsewhere.

The Department has very close ties with Bioengineering in the College of Engineering and extensive collaborations with faculty in the Huntsman Cancer Institute and the Departments of Anesthesiology, Radiology, Obstetrics and Gynecology, Internal Medicine, Oncological Sciences, Pathology and Pediatrics. These collaborations not only make possible the translational interests of Departmental faculty, but encourage the building of teams that will ultimately secure programmatic funding to expand faculty and student recruitment within the Department. To this end, Dr. Grainger has already submitted two pre-proposals to the USTAR program which, if funded, would lead to expansion by five to ten new tenure and research track PI level faculty over the next five years.

As is the case with each of the Departments within the College, Pharmaceutics is split into three buildings, two on the HSC campus and one in Research Park. All program reviewers remarked on the difficulty that exists in maintaining Departmental cohesiveness and morale in face of this separation of students and faculty.

**Pharmacology and Toxicology**

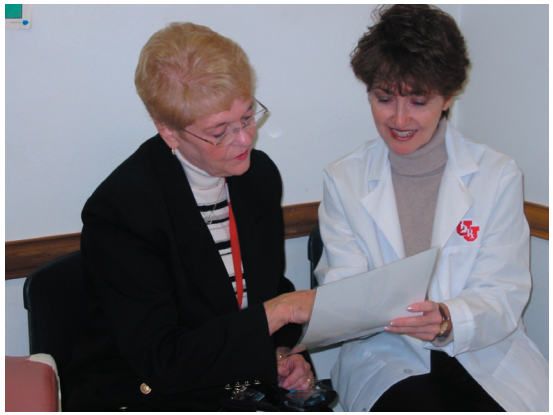
The Department of Pharmacology and Toxicology is the largest of the four departments within the College of Pharmacy. This distinction is due in large part to the dual nature of its academic and research function in the HSC. The Department resides administratively in the College of Pharmacy, but is also the Pharmacology Department for the School of Medicine. The Department consists of 16 tenured/tenure track faculty and 15 full time research faculty. There are approximately 130 researchers in the department, including 20 graduate students. In the recent review of the Department by the Graduate Council, the Department received high praise for the quality of its faculty in both instruction and in the conduct of funded research, the excellence of its students, its commitment to the well-being of research track faculty and its significant involvement in the newly established Pharm. D./Ph. D. track for the education of clinical scientists.

Reporting directly to the Chair are the Center for Human Toxicology and its affiliated Sports Medicine Research and Testing Laboratory, the Anticonvulsant Drug Development Program and the Preclinical Drug Development Program. In order to enhance research and training programs in translational research, the Department promoted the development of the Utah Addictions Center and has actively participated in a developing program in Pediatric Pharmacotherapy.

Major areas of research emphasis include Neuroscience, Cancer Biology, Biochemical and Molecular Toxicology and Analytical Toxicology. Over the next several years as new positions become available, the Department aims to expand into the areas of pharmacogenetics and pharmacogenomics. New collaborative initiatives generated through USTAR, the Brain Institute, Pediatrics, and the Huntsman Cancer Institute are expected to add about four new tenure track and four new research track faculty over the next five years. Major funding through the Superfund program is being sought for a highly collaborative program involving Pharmacy, Health , Pulmonary Medicine and Engineering.. This program is expected to add 12 to 16 new researchers to the Department

To a much greater extent than is the case with the other Departments, the Department of Pharmacology and Toxicology has a great dependence on small animal (primarily rodent) research, and thus has a critical need for large, state-of-the-art animal facilities. These needs are currently being adequately met in the Biopolymers Research Building and in the newly refurbished Building 417 in Research Park, but consolidation into a new building will require a major commitment to animal facilities.

**Pharmacotherapy**



The Department of Pharmacotherapy is a quite different entity from the three departments described above. The six tenure track, ten core clinical track and five research track faculty are generally active in scholarship, despite the relatively heavy teaching load imposed by their substantial responsibilities in the professional education (Pharm. D.) program. The vision of the Department as recently articulated by a Faculty Assessment Task Force convened by the Chair is to become "…a national leader in pharmacotherapy through innovation and integration of education, practice and scholarship…" This vision will be enhanced by the revitalization of the M. S. degree program with a focus on Outcomes Research that is offered within the Department.

A major change in the overall direction of the Department occurred with the creation of the Pharmacotherapy Outcomes Research Center (PORC) in Research Park less than two years ago. This center now houses the research faculty noted above, and is generating major funding, largely through contracts with the pharmaceutical industry. In addition to resource creation, the PORC provides a vehicle for significant scholarship and peer-reviewed publication for many of the faculty in the Department. Another major component of the Department is the Utah Poison Control Center, located in Research Park, but in a different building from PORC. Expansion of PORC, implementation of the revised graduate program and enhancement of the teaching component of the professional program will require the addition of three tenure track, three clinical track and two research track faculty over the next two years.

Efforts to promote regular interactions among the faculty are hindered by the scattering of faculty into Skaggs Hall and two buildings in Research Park. Faculty collaboration will be markedly enhanced by creating a cluster of office/conference/common work area spaces that can accommodate faculty, graduate students, postdocs and fellows.

The Department has minimal requirements for research laboratory space, although one faculty member does lab research and will direct a Ph. D. student who has been admitted to the Pharm. Tox. graduate program. The new HSEB, however, does not have facilities for the teaching (dispensing) laboratory and its associated "clean lab" for instruction in sterile formulation. These facilities will be an essential feature of a new building.

**General Conclusions and Summary**

The College of Pharmacy remains on an upward trajectory in terms of new hires, expanding programs and a growing graduate student/postdoc/fellow population. The need for a new building to consolidate faculty and students, enhance collaboration and multi-disciplinary program development and improve the collaborative and creative climate for the research enterprise is compelling. The table below is a snapshot of the present researcher population within the College and the amount of laboratory and support space available within the six currently occupied buildings.

| Department | Number of PIs | Number of Researchers | Net Square Feet total | NSF per PI | NSF per Researcher |
|---|---|---|---|---|---|
| Med. Chem. | 9 | 63 | 13,329 | 1,481 | 212 |
| Pharmaceutics | 10 | 103 | 18,478 | 1,848 | 179 |
| Pharm. Tox. | 31 | 130 | 28,308 | 913 | 218 |
| Pharmacotherapy | 11* | 15* | * | * | * |
| Total/(average) | 50 | 296 | 60,115 | (1,202) | (203) |

*The totals in the table do not include Pharmacotherapy researchers. Numbers for the Department of Pharmacotherapy are not very meaningful, since very little lab research is carried out by Department faculty. Individual offices and common computer/conference/workroom spaces constitute most of the space assigned to the Department, along with a single 523 NSF laboratory. The total assigned space at present is 7485 NSF.

The Research Park personnel most likely to move to the new building are listed, by unit and current location, in the table below. The space totals assume 200 NSF per person, as derived from the table above. The data do not account for probable programmatic expansion; a reasonable expectation would be 20-30% for Pharmaceutics and Medicinal Chemistry, and 50% for the rapidly growing PORC.

| Unit | Location | No. of Personnel | Total NSF required |
|---|---|---|---|
| Med. Chem. | 421 Wakara Way | 7 | 1400 |
| Med. Chem. | 419 Wakara Way | 18 | 3600 |
| Pharmaceutics | 421 Wakara Way | 72 | 14,400 |
| Pharmacotherapy | 421 Wakara Way | 20 | 4000 |
| Pharm. Tox.* | 417 Wakara Way | 25 | 5000 |
| Total | | 142 | 28,400 |

*The Pharm. Tox. Program in question is the Center for Human Toxicology (CHT), which is an academic component of Pharm. Tox. The Sports Medicine Testing and Research Laboratory (SMRTL) is expected to remain in Research Park as a free-standing entity reporting to the Chair of Pharm. Tox.

The total College space holdings are about 92,893 NSF (net square feet), which includes offices, conference rooms, class rooms, common spaces and the College administrative suite. The current efficiency of utilization is about 65%, corresponding to a single building of about 143,000 GSF. While a building of 140,000 to 150,000 GSF at 65%
efficiency would house the current research groups plus the Department of Pharmacotherapy's personnel, little expansion room would be available. The five year projections noted above suggest that by 2011 an additional 28,000 to 37,000 NSF will be required to handle research expansion. By the time the building is complete, it will be far too small.

It is anticipated that much of the additional space needed after 2011 will be in the area of interdisciplinary research with other colleges and programs. New and expanded collaborative programs are being developed between the College of Pharmacy and, for example, Bioengineering, Pharmaco-informatics (with the Department of Biomedical Informatics), Pediatrics, Radiology and the Huntsman Cancer Institute. To that end, the master plan envisions a future connection to a second building accommodating these needs within the context of the entire Health Sciences Center.

## EXISTING SPACE INVENTORY .APP-2

| DEAN'S OFFICE<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 582 - L.S. Skaggs Pharmacy / 202 | Dean's Office | 249 |
| 582 - L.S. Skaggs Pharmacy / 201 | Dean's Admin. support | 621 |
| 582 - L.S. Skaggs Pharmacy / 201A | Dean's Storage | 120 |
| 582 - L.S. Skaggs Pharmacy / 203 | Office | 232 |
| 582 - L.S. Skaggs Pharmacy / 16 | Student Lounge | 907 |
| 582 - L.S. Skaggs Pharmacy / 37 | Office | 90 |
| 582 - L.S. Skaggs Pharmacy / 206 | Office | 139 |
| 582 - L.S. Skaggs Pharmacy / 201C | Office | 114 |
| 582 - L.S. Skaggs Pharmacy / 204 | Office | 94 |
| 582 - L.S. Skaggs Pharmacy / 205 | Office | 265 |
| 582 - L.S. Skaggs Pharmacy / 25 | Office | 90 |
| 582 - L.S. Skaggs Pharmacy / 26 | Office | 90 |
| 582 - L.S. Skaggs Pharmacy / 4 | Office and Repair | 361 |
| | **TOTAL DEAN'S OFFICE** | **3,372** |

| MEDICINAL CHEMISTRY<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 570 - BPRB / 262 | Non-Class Lab | 560 |
| 570 - BPRB / 265 | Non-Class Lab | 557 |
| 570 - BPRB / 268 | Non-Class Lab | 560 |
| 570 - BPRB / 271 | Non-Class Lab | 555 |
| 570 - BPRB / 274 | Non-Class Lab | 560 |
| 570 - BPRB / 280 | Non-Class Lab | 845 |
| 570 - BPRB / 285 | Non-Clas Lab SV | 274 |
| 570 - BPRB / 290 | Non-Clas Lab SV | 54 |
| 570 - BPRB / 00200G | Central Service | 322 |
| 570 - BPRB / 00200P | Lounge Service | 74 |
| 570 - BPRB / 00285A | Non-Clas Lab SV | 130 |
| 570 - BPRB / 00285B | Non-Clas Lab SV | 131 |
| 570 - BPRB / 00285Z | Non-Clas Lab SV | 97 |
| 570 - BPRB / 295 | Office | 302 |
| 570 - BPRB / 00295A | Office | 134 |
| 570 - BPRB / 00295B | Office | 134 |
| 570 - BPRB / 00295C | Office | 134 |
| 570 - BPRB / 00295D | Office | 134 |
| 570 - BPRB / 00295E | Office | 174 |
| 570 - BPRB / 00295Z | Office Service | 96 |
| 570 - BPRB / 00299A | Non-Clas Lab SV | 20 |
| 570 - BPRB / 00010P | Non-Clas Lab SV | 187 |
| 570 - BPRB / 0010W | Non-Clas Lab SV | 194 |
| 570 - BPRB / 50 | Non-Clas Lab SV | 875 |
| 582 - L.S. Skaggs Pharmacy / 303 | Office | 283 |
| 582 - L.S. Skaggs Pharmacy / 305 | Non-Class Lab | 380 |
| 582 - L.S. Skaggs Pharmacy / 307 | Office | 206 |
| 582 - L.S. Skaggs Pharmacy / 308 | Office | 164 |
| 582 - L.S. Skaggs Pharmacy / 309 | Non-Class Lab | 959 |
| 582 - L.S. Skaggs Pharmacy / 310 | Office | 188 |
| 582 - L.S. Skaggs Pharmacy / 311 | Non-Class Lab | 1055 |
| 582 - L.S. Skaggs Pharmacy / 312 | Office | 126 |
| 582 - L.S. Skaggs Pharmacy / 313 | Non-Class Lab | 319 |
| 582 - L.S. Skaggs Pharmacy / 314 | Office | 138 |

| MEDICINAL CHEMISTRY CON'T.<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 582 - L.S. Skaggs Pharmacy / 315 | Non-Class Lab | 575 |
| 582 - L.S. Skaggs Pharmacy / 00303A | Non-Class Lab | 138 |
| 582 - L.S. Skaggs Pharmacy / 00305A | Non-Clas Lab SV | 122 |
| 582 - L.S. Skaggs Pharmacy / 00305B | Non-Clas Lab SV | 33 |
| 582 - L.S. Skaggs Pharmacy / 00305C | Non-Class Lab | 344 |
| 582 - L.S. Skaggs Pharmacy / 21 | Non-class Lab | 580 |
| 582 - L.S. Skaggs Pharmacy / 23 | Non-Class Lab/ Stor. | 580 |
| 582 - L.S. Skaggs Pharmacy / 23A | Non-Class Lab | 143 |
| 582 - L.S. Skaggs Pharmacy / 2 | Instruments | 210 |
| 582 - L.S. Skaggs Pharmacy / 38A | Non-Class Lab | 687 |
| 582 - L.S. Skaggs Pharmacy / 26 | Non-Class Lab SV | 90 |
| 582 - L.S. Skaggs Pharmacy / 27 | Office | 110 |
| 857 - 421 Wakara Way / 360 | Office | 167 |
| 857 - 421 Wakara Way / 361 | Non-Clas Lab SV | 231 |
| 857 - 421 Wakara Way / 362 | Non-Class Lab | 291 |
| 857 - 421 Wakara Way / 363 | Non-Class Lab | 395 |
| 857 - 421 Wakara Way / 364 | Conference Room | 354 |
| 857 - 421 Wakara Way / 365 | Office | 340 |
| 857 - 421 Wakara Way / 366 | Office | 134 |
| 857 - 421 Wakara Way / 367 | Office | 149 |
| 857 - 421 Wakara Way / 368 | Inactive Area | 99 |
| 857 - 421 Wakara Way / 369 | Office | 98 |
| 857 - 421 Wakara Way / 370 | Inactive Area | 134 |
| 857 - 421 Wakara Way / 00360A | Office Service | 149 |
| 857 - 421 Wakara Way / 00360B | Office Service | 91 |
| 859 - 419 Wakara Way / 205 | Non-Class Lab | 277 |
| 859 - 419 Wakara Way / 00205A | Non-Class Lab | 325 |
| 859 - 419 Wakara Way / 00205B | Non-Class Lab | 414 |
| 859 - 419 Wakara Way / 00205C | Non-Clas Lab SV | 310 |
| 859 - 419 Wakara Way / 00205D | Office | 82 |
| 859 - 419 Wakara Way / 00205E | Office | 87 |
| 859 - 419 Wakara Way / 00205F | Non-Class Lab | 288 |
| 859 - 419 Wakara Way / 00205G | Office | 155 |
| 859 - 419 Wakara Way / 00205H | Office | 152 |

| MEDICINAL CHEMISTRY CON'T.<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 859 - 419 Wakara Way / 00205J | Study Room | 165 |
| 859 - 419 Wakara Way / 00205K | Non-Clas Lab SV | 188 |
| 859 - 419 Wakara Way / 00205L | Non-Clas Lab SV | 171 |
| 859 - 419 Wakara Way / 00205M | Non-Class Lab | 600 |
| 859 - 419 Wakara Way / 00205N | Non-Clas Lab SV | 64 |
| 859 - 419 Wakara Way / 00205P | Office Service | 85 |
| 859 - 419 Wakara Way / 00205R | Office | 169 |
| 859 - 419 Wakara Way / 00205T | Conference Room | 167 |
| 859 - 419 Wakara Way / 00205U | Office | 87 |
| 859 - 419 Wakara Way / 00205V | Office | 150 |
| 859 - 419 Wakara Way / 00205W | Office Service | 70 |
| 859 - 419 Wakara Way / 00205Y | Inactive Area | 184 |
| | **TOTAL MEDICINAL CHEMISTRY** | **21,355** |

| PHARMACOTHERAPY AND TOXICOLOGY<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 582 - L.S. Skaggs Pharmacy / 112 | Dept. office | 446 |
| 582 - L.S. Skaggs Pharmacy / 113A | office | 160 |
| 582 - L.S. Skaggs Pharmacy / 107 | office | 204 |
| 582 - L.S. Skaggs Pharmacy / 113 | conference room | 137 |
| 582 - L.S. Skaggs Pharmacy / 103 | office | 128 |
| 582 - L.S. Skaggs Pharmacy / 108A-G | animal facility | 1161 |
| 582 - L.S. Skaggs Pharmacy / 102B | office | 81 |
| 582 - L.S. Skaggs Pharmacy / 115 | Lab | 691 |
| 582 - L.S. Skaggs Pharmacy / 116 | office | 138 |
| 582 - L.S. Skaggs Pharmacy / 116A | lab | 283 |
| 582 - L.S. Skaggs Pharmacy / 105A | office | 131 |
| 582 - L.S. Skaggs Pharmacy / 105 | lab | 748 |
| 582 - L.S. Skaggs Pharmacy / 106 | lab | 428 |
| 582 - L.S. Skaggs Pharmacy / 102A | office | 131 |
| 582 - L.S. Skaggs Pharmacy / 102C | lab | 117 |
| 582 - L.S. Skaggs Pharmacy / 102 | lab | 353 |
| 582 - L.S. Skaggs Pharmacy / 34 | lab | 428 |
| 582 - L.S. Skaggs Pharmacy / 35 | office | 146 |
| 582 - L.S. Skaggs Pharmacy / 35B | lab | 283 |
| 582 - L.S. Skaggs Pharmacy / 36 | lab | 125 |
| 582 - L.S. Skaggs Pharmacy / 38 | lab | 270 |
| 582 - L.S. Skaggs Pharmacy / 28 | lab | 868 |
| 582 - L.S. Skaggs Pharmacy / 31A | office | 112 |
| 582 - L.S. Skaggs Pharmacy / 30 | office | 98 |
| 570 - BPRB / 378 | 374 BPRB | 552 |
| 570 - BPRB / 378 | 378 BPRB | 548 |
| 570 - BPRB / 378 | 386 BPRB | 547 |
| 570 - BPRB / 378 | 386A BPRB | 549 |
| 570 - BPRB / 378 | 388 BPRB | 95 |
| 570 - BPRB / 378 | 390 BPRB | 251 |
| 570 - BPRB / 378 | 390A BPRB | 132 |
| 570 - BPRB / 378 | 390B BPRB | 133 |
| 570 - BPRB / 378 | 390C BPRB | 134 |
| 570 - BPRB / 390D | office | 178 |

| PHARMACOTHERAPY AND TOXICOLOGY CON'T. | | |
|---|---|---|
| **Location:** | | |
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 570 - BPRB / 408A | office | 176 |
| 570 - BPRB / 408B | office | 134 |
| 570 - BPRB / 408C | new faculty | 134 |
| 570 - BPRB / 408D | office | 134 |
| 570 - BPRB / 408Z | office hallway | 41 |
| 570 - BPRB / 410A | office | 134 |
| 570 - BPRB / 410B | office | 134 |
| 570 - BPRB / 410C | office | 134 |
| 570 - BPRB / 410D | office | 162 |
| 570 - BPRB / 410E | office | 119 |
| 570 - BPRB / 410Z | office hallway | 109 |
| 570 - BPRB / 420 | lab | 795 |
| 570 - BPRB / 428 | lab | 560 |
| 570 - BPRB / 432 | lab | 451 |
| 570 - BPRB / 434 | lab | 90 |
| 570 - BPRB / 436 | lab | 180 |
| 570 - BPRB / 438 | lab | 380 |
| 570 - BPRB / 440 | lab | 560 |
| 570 - BPRB / 444 | lab | 471 |
| 570 - BPRB / 449A | lab | 199 |
| 570 - BPRB / 449B | lab | 220 |
| 570 - BPRB / 449C | lab | 134 |
| 570 - BPRB / 452 | lab | 135 |
| 570 - BPRB / 476 | Instrument Rm. | 476 |
| 570 - BPRB / 480 | lab | 560 |
| | **L.S.Skaggs Pharmacy** | **7,667** |
| | **BPRB** | **9,741** |

| PHARMACOTHERAPY AND TOXICOLOGY CHT<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 860 - 417 Wakara Way / 2111 | Front Office | 366 |
| 860 - 417 Wakara Way / 2111A | * Conference rm. | 224 |
| 860 - 417 Wakara Way / 2111B | * Records | 334 |
| 860 - 417 Wakara Way / 2112 | office | 140 |
| 860 - 417 Wakara Way / 2113 | copy/fax | 87 |
| 860 - 417 Wakara Way / 2114 | office | 88 |
| 860 - 417 Wakara Way / 2115 | office - tbh | 87 |
| 860 - 417 Wakara Way / 2116 | office | 134 |
| 860 - 417 Wakara Way / 2117 | office - tbh | 87 |
| 860 - 417 Wakara Way / 2118 | office | 134 |
| 860 - 417 Wakara Way / 2119 | office | 85 |
| 860 - 417 Wakara Way / 2120 | office | 134 |
| 860 - 417 Wakara Way / 2121 | office | 85 |
| 860 - 417 Wakara Way / 2122 | office | 134 |
| 860 - 417 Wakara Way / 2124 | office | 227 |
| 860 - 417 Wakara Way / 2131 | office | 158 |
| 860 - 417 Wakara Way / 2132 | office | 136 |
| 860 - 417 Wakara Way / 2133 | office | 158 |
| 860 - 417 Wakara Way / 2135 | office | 104 |
| 860 - 417 Wakara Way / 2142 | * storage | 68 |
| 860 - 417 Wakara Way / 2151 | SMRTL Lab | 2,828 |
| 860 - 417 Wakara Way / 2152 | shared office | 300 |
| 860 - 417 Wakara Way / 2154 | SMRTL accessing | 150 |
| 860 - 417 Wakara Way / 2156 | specimen receiving | 150 |
| 860 - 417 Wakara Way / 2158 | * cold storage | 596 |
| 860 - 417 Wakara Way / 2160 | * QC prep room | 238 |
| 860 - 417 Wakara Way / 2172 | * tank storage | 112 |
| 860 - 417 Wakara Way / 2171 | CHT lab | 3,023 |
| 860 - 417 Wakara Way / 2174 | * storage | 200 |
| 860 - 417 Wakara Way / 2029 | research lab | 880 |
| | **CHT 417 Wakara Way** | **11,447** |

* Shared space with SMRTL

| PHARMACOTHERAPY AND TOXICOLOGY CHT<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 860 - 417 Wakara Way / 3211 | reception area | 448 |
| 860 - 417 Wakara Way / 3215 | office | 138 |
| 860 - 417 Wakara Way / 3216 | office | 138 |
| 860 - 417 Wakara Way / 3217 | office | 192 |
| 860 - 417 Wakara Way / 3218 | office | 144 |
| 860 - 417 Wakara Way / 3225 | office | 396 |
| 860 - 417 Wakara Way / 3210 / 3212 | office | 136 |
| 860 - 417 Wakara Way / 3221 | lab | 246 |
| 860 - 417 Wakara Way / 3221A | lab | 477 |
| 860 - 417 Wakara Way / 3221B | lab | 258 |
| 860 - 417 Wakara Way / 3222 / 3222A | lab | 740 |
| 860 - 417 Wakara Way / 3224 | lab | 1156 |
| 860 - 417 Wakara Way / 3223 | lab | 528 |
| 860 - 417 Wakara Way / 3226 / 3226A | lab | 700 |
| | **ADD 417 Wakara Way** | **5,697** |
| | **TOTAL PHARM/TOX** | **34,552** |

| PHARMACOTHERAPY<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 582 - L.S. Skaggs Pharmacy / 258A | office | 127 |
| 582 - L.S. Skaggs Pharmacy / 258 | office | 136 |
| 582 - L.S. Skaggs Pharmacy / 15 | office | 289 |
| 582 - L.S. Skaggs Pharmacy / 268 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 260 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 267 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 264 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 263 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 101 | Lab | 523 |
| 582 - L.S. Skaggs Pharmacy / 255 | office | 114 |
| 582 - L.S. Skaggs Pharmacy / 259 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 261 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 262 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 265 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 266 | office | 126 |
| 582 - L.S. Skaggs Pharmacy / 254 | office | 118 |
| 582 - L.S. Skaggs Pharmacy / 302 | office | 100 |
| 582 - L.S. Skaggs Pharmacy / 14 | office | 282 |
| 892 - 585 Komas | office | 2,274 |
| 525 - University Hospital | office | (b) |
| | **L.S. Skagg's Pharmacy** | **5,223** |
| | **TOTAL PHARMACOTHERAPY** | **5,223** |

Part time personnel are calculated as occupying the space full time for the purposes of this table.

(a) Utah Poison Control Center space (b) University Hospital Space

| PORC<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 857 - 421 Wakara Way / 208H | Office | 210 |
| 857 - 421 Wakara Way / 208A | Office | 170 |
| 857 - 421 Wakara Way / 208G | Office | 140 |
| 857 - 421 Wakara Way / 208D | Office | 600 |
| 857 - 421 Wakara Way / 208K | Office | 150 |
| 857 - 421 Wakara Way / 208L | Office | 150 |
| 857 - 421 Wakara Way / 208M | Office | 150 |
| 857 - 421 Wakara Way / 209B | Office | 140 |
| 857 - 421 Wakara Way / 209C | Office | 140 |
| 857 - 421 Wakara Way / 209F | Office | 140 |
| 857 - 421 Wakara Way / 209G | Office | 200 |
| 857 - 421 Wakara Way / 209K | Office | 135 |
| 857 - 421 Wakara Way / 209M | Office | 135 |
| 857 - 421 Wakara Way / 209J | Office | 135 |
| 857 - 421 Wakara Way / 208N | Office | 480 |
| 857 - 421 Wakara Way / 208Q | Computer | 100 |
| 857 - 421 Wakara Way / 209A | Library | 500 |
| 857 - 421 Wakara Way / 209T&R | Break | 100 |
| 857 - 421 Wakara Way / 209P | Meeting | 400 |
| 857 - 421 Wakara Way / 208&209 | Path | 300 |
| | **421 Wakara Way** | **4,475** |
| | **TOTAL PORC** | **4,475** |

| PHARMACEUTICS<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 582 - L.S. Skaggs Pharmacy / 207 | Lab | 341 |
| 582 - L.S. Skaggs Pharmacy / 208 | Lab | 283 |
| 582 - L.S. Skaggs Pharmacy / 209 | Lab | 354 |
| 582 - L.S. Skaggs Pharmacy / 210 | Office | 138 |
| 582 - L.S. Skaggs Pharmacy / 211 | Office/Lab | 280 |
| 582 - L.S. Skaggs Pharmacy / 301 | Office | 319 |
| 582 - L.S. Skaggs Pharmacy / 212 | Office | 162 |
| 857 - 421 Wakara Way / 308 | Lab | 458 |
| 857 - 421 Wakara Way / 318 | Office | 255 |
| 857 - 421 Wakara Way / 319 | Office | 109 |
| 857 - 421 Wakara Way / 312 | Office | 77 |
| 857 - 421 Wakara Way / 314 | Office | 80 |
| 857 - 421 Wakara Way / 316 | Office | 132 |
| 857 - 421 Wakara Way / 321 | Office | 160 |
| 857 - 421 Wakara Way / 320 | Office | 110 |
| 857 - 421 Wakara Way / 313 | Office | 77 |
| 857 - 421 Wakara Way / 304 | Lab | 1161 |
| 857 - 421 Wakara Way / 301 | Office/Lab | 860 |
| 857 - 421 Wakara Way / 301A | Office | 204 |
| 582 - L.S. Skaggs Pharmacy / 213 | Lab | 839 |
| 582 - L.S. Skaggs Pharmacy / 210A | Lab | 283 |
| 582 - L.S. Skaggs Pharmacy / 212A | Storage | 42 |
| 582 - L.S. Skaggs Pharmacy / 213A | Office | 188 |
| 582 - L.S. Skaggs Pharmacy / 213B | Office | 140 |
| 857 - 421 Wakara Way / 310 | Lab | 741 |
| 857 - 421 Wakara Way / 324 | Lab | 491 |
| 857 - 421 Wakara Way / 311 | Office | 134 |
| 857 - 421 Wakara Way / 309 | Lab | 458 |
| 857 - 421 Wakara Way / 305 | Office | 134 |
| 857 - 421 Wakara Way / 306 | Lab | 743 |
| 857 - 421 Wakara Way / 307 | Lab | 454 |
| 857 - 421 Wakara Way / 330/331 | Lab | 685 |
| 857 - 421 Wakara Way / 301A | Office | 135 |
| 857 - 421 Wakara Way / 333 | Lab | 415 |

| PHARMACEUTICS CON'T.<br>Location: | | |
|---|---|---|
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 857 - 421 Wakara Way / 328 | Lab | 256 |
| 857 - 421 Wakara Way / 303 | Lab | 615 |
| 857 - 421 Wakara Way / 317 | Computer Lab | 130 |
| 857 - 421 Wakara Way / 322 | Conf Room | 321 |
| 857 - 421 Wakara Way / 323 | Conf Room | 197 |
| 857 - 421 Wakara Way / 325 | Storage closet | 41 |
| 857 - 421 Wakara Way / 326A | Tissue Culture | 132 |
| 857 - 421 Wakara Way / 327 | Instrmt Room | 208 |
| 857 - 421 Wakara Way / 329 | Cold Room | 77 |
| 857 - 421 Wakara Way / 334 | Surgery Room | 202 |
| 857 - 421 Wakara Way / 335 | Instrmt. Room | 253 |
| 857 - 421 Wakara Way / 336 | Storage Room | 117 |
| 857 - 421 Wakara Way / 336A | Animal Room | 27 |
| 857 - 421 Wakara Way / 327 | Inst. Room | 208 |
| 857 - 421 Wakara Way / 337A | DI Water Room | 42 |
| 857 - 421 Wakara Way / 315 | Office | 154 |
| 857 - 421 Wakara Way / 326 | Lab | 575 |
| 857 - 421 Wakara Way / 302 | Lab | 603 |
| 857 - 421 Wakara Way / 340 | Computer Lab | 302 |
| 570 - BPRB / 205AA | Office | 320 |
| 570 - BPRB / 205A | Office | 170 |
| 571 - BPRB / 205D | Office | 130 |
| 572 - BPRB / 205E | Office | 130 |
| 573 - BPRB / 215A | Office | 130 |
| 574 - BPRB / 215B | Office | 130 |
| 575 - BPRB / 215MR | Office | 140 |
| 576 - BPRB / 210 | Office | 80 |
| 577 - BPRB / 17* | Lab | 250 |
| 578 - BPRB / 249 | Lab | 900 |
| 579 - BPRB / 256 | Lab | 400 |
| 580 - BPRB / 259 | Lab | 600 |
| 581 - BPRB / 205B | Office | 130 |
| 582 - BPRB / 205C | Office | 130 |
| 583 - BPRB / 215C | Office | 130 |

| PHARMACEUTICS CON'T. | | |
|---|---|---|
| Location: | | |
| **Building No. - Name / Room No.** | **Type of Use** | **Total Area** |
| 583 - BPRB / 215D | Office | 130 |
| 583 - BPRB / 108J | Office | * |
| 583 - BPRB / 126 | Lab | * |
| 583 - BPRB / 230 | Lab | * |
| 583 - BPRB / 234 | Lab | 560 |
| 583 - BPRB / 238 | Lab | 560 |
| 583 - BPRB / 108B | Office | * |
| 583 - BPRB / 154 | Lab | * |
| 583 - BPRB / 160 | Office | * |
| 583 - BPRB / 190D | Office | 178 |
| 583 - BPRB / 190C | Office | 127 |
| 583 - BPRB / 190 | Office | 197 |
| 583 - BPRB / 186 | Office | 364 |
| 583 - BPRB / 182 | Lab | 195 |
| 583 - BPRB / 178 | Lab | 564 |
| 583 - BPRB / 170 | Lab | 843 |
| 583 - BPRB / 174 | Lab | 270 |
| 583 - BPRB / 242 | Instrmt. Room | 160 |
| 583 - BPRB / 220 | Tissue Culture | 360 |
| 583 - BPRB / 225 | Surgery Room | 170 |
| 583 - BPRB / 238A | Radioisotope | 200 |
| 583 - BPRB / 246 | Cold Room | 60 |
| 583 - BPRB / 201 | Conf Room | 360 |

| | |
|---|---|
| **L.S. Skaggs Pharmacy** | **3,369** |
| **421 Wakara Way** | **12,533** |
| **BPRB.** | **9,068** |
| **TOTAL PHARMACEUTICS** | **24,970** |

*These rooms are assigned to Bioengineering and are not included in space assigned to the Pharmaceutics Dept.

MEETING MINUTES .APP-3

## KICK OFF MEETING MINUTES- JANUARY 6, 2006

**Attendees:**

- James Bardsley
- Steve Panish
- John Mauger
- Art Broom
- Diana Brixner
- Bill Crowley
- Steve Kern
- Chris M. Ireland
- Bill McCreary
- Wayne Peay
- David Maher
- Randall Funk
- Tami Cleveland
- Peter Emerson
- Mark Whiteley
- Stephanie McCarthy

**Steering Committee Point of Contact:**

- James Bardsley
- Art Broom,
- Joe Harman

**Meeting Synopsis:**

- Round Table Introductions
- EDA/*nbbj* introduction
- Comparable Facilities Presentation / Discussion
- College of Pharmacy Dean and Department Chairs outlined their needs, goals, vision for the new facility

**Workshop: "Your Vision for the College of Pharmacy"**

Dean Mauger asserted that the current success of the College of Pharmacy can be contributed to two core factors:

1.) PI driven research
2.) The leadership provided by the 4 Department Chairs.
3.) High quality patient care – facility driven

He therefore turned the floor over to the Department Chairs to discuss the challenges they face as individual Departments and as a College that may be addressed by the new facility.

**A. Steven Kern, Interim Chair, Pharmaceutics and Pharm. Chemistry**

- **Departmental Identity** – Because space is a commodity, the College of Pharmacy and its Departments are currently dispersed in three distinct locations across Campus including the "remote" Research Park (no graduate student interface). The new facility, therefore, provides the opportunity to unite and interact on three levels 1.) Department, 2.) College and 3.) School of Health Sciences.
- Consolidation supports the "hybridized" strength of the College and facilitates greater interaction.
- 11 Faculty
- Opportunities for spatial and equipment overlap = practical efficiency.
- Bridge to School of Medicine
- Linear progression of research process: make the pills, drug delivery, bio-engineering interface, gene delivery / nanotechnoogy
- Bio-interaction w/ Emma Eccles and Huntsman Institute.
- Desire to group office space and force interaction on all levels.
- Funding mechanisms encourage interaction.

**B. Chris Ireland, Chair, Medicinal Chemistry**

- UofU currently #2 Research College of Pharmacy in the nation. Goal is to #1 (UCSF strongest competitor).
- Highly diversified and interdisciplinary
- Pre-Clinical / Clinical - Translation of basic information into the clinic.
- Drug Discovery – connection to Huntsman Cancer Institute
- Tissue Engineering = strong ties to Bio-Engineering and Surgery
- Structural Biology
- Computational modeling
- Some people spinning off companies
- Common Space: computational capabilities, growing microbes and human tissue, no clinical testing
- Incubator space in building? Not yet tested - potential conflict.
- Modularized faculty space.
- Open lab space.
- **Vibration and air flow consideration critical.**
- **Versatility and flexibility important.**
- Skaggs has no flexibility.
- No interaction space, common space
- New discipline integration in the future?
- Existing auditorium is a great gathering space for outreach / continuing education programs.
- Large classroom spaces provided in HS Education Building
- Small education spaces desirable, e.g., small conference room with 3-D visualization capabilities.
- Some interaction w/ private entities, Research Park Model favorable. Opportunity to integrate space for private partnerships in new facilities would be interesting to investigate.
- Growing inevitable but not a goal – **quality more important than quantity** – want

to be a magnet.
- Growing Interdisciplinary

**C. William Crowley, Chair, Pharmacology and Toxicology**
- Neuro Science and Toxicology – Biology, part of School and Medicine, Brain Institute
- Basic Mechanisms, some Drug Discovery and Development
- No spin off companies
- Animals: Colony Rooms to Procedure Rooms,
  rats and mice – Transgenic facilities
- Security a priority – Schedule I Drugs
- Translational: Program for Clinical Pharmacology
- Flexibility – interdisciplinary interaction = open lab
- College cannot fulfill state market demand for pharmacists. College must therefore act as a magnet for Residency Program.
- **Quality before quantity**
- Growth inevitable: summer undergrad., graduate, pot grad., pre doc., post doc., residencies, clinical scientists and industry training. Potential for interaction w/ unique aggregate of students.
- Strength of current building – auditorium provides space for high quality continuing ed. Programs at reasonable costs to Pharmacists.

**D. Diana Brixner, Chair, Pharmacotherapy**
- Clinically oriented - teaching Practitioners using clinical practice settings (often off site), lecture halls (on site). Need offices w/ adjacent conference rooms for consultation.
- College faculty lounge provides opportunity for interaction and collaboration.
- Post Graduate training. Central touch down space.
- Outcomes Research needs 1.) data bases and 2.) high computation spaces. No connectivity between 1 & 2 currently.
- Most research funded privately. Corporate interaction spaces required, e.g., conference rooms w/ video conferencing capabilities.
- Educational component critical in addition to research.
- Pharmacy in lobby of building? YES!
- Desire to grow from a masters program into PhD.
- Dispensing labs may need to be in building (merge w/ sterile compound area?).
- Clinical trial space.
- Continuing ed. Critical: existing auditorium houses up to 300. Video stream - conference rooms provide opportunity for interactive workshop sites.
- Pharmacy / continuing ed. / compounding = training opportunity
- Live lab for Pharmacy and ACE = up to date, credentialed sterile compounding
- **Consolidation & Organization**

**E. Art Broom, Associate Dean for Research and Planning**
**Wayne Peay, Library of Medicine**
- A good example of what we do not want = Skaggs Hall
- Lack of clearly identifiable bench – bedside transitional medicine.
- No ADMET capabilities on campus. Grant applications currently in. Pharmas will pay for

trials.
- HS Education building not to be considered separate from College of Pharmacy. Significant resource - an interdisciplinary building w/ a technological infrastructure robust enough to function as lab in its own right.
- HSEB = model of how to integrate w/ existing Library of Medicine.
- **Existing Specialist / Core Facilities:**
    1. NMR (may have a need for an 800 MHz instrument in the future)\
    2. Mass Spectometry – not a large facility
    3. Core Facility on HSC (in Bio-Polymers Bldg.)
    4. Analytical Instrumentation Lab in Med. Chemistry and could be a centralized, shared resource.
    5. Small animal imaging facility.
    6. Animals – mainly rats and mice. May be addressed in Brain Institute.
    7. Some clean rooms – small area, inter dept. use.
    8. Administrative support. If centralized could provide efficiency, lack of duplication.
- Federal cost recovery key to building efficiency.

**F. About college Organization**
- Each PhD program is separate
- Each Graduate Student is admitted by the individual department.
- Professional program is College run.
- Currently 45 tenure track
- Approximately 30 Senior PI

**G. Randall Funk, Campus Design and Construction**
- Be aware of previous mistakes of other campus facilities:
    1. Trying to cram in everything (duplication)
    2. Specialization of space rather than flexible generalized space.

***H. In Summary – The Big Ideas:***
- Consolidation / Interaction (which programs make sense to stay where they are)
- Quality not Growth
- Education is Inherent
- Outreach for Continuing Education
- Technology is Inherent
- Follow Lead of Education Building
- Shared Technology Hub
- Small Animal Facility
- 300 Seat Lecture Theater? Depends on Future of Existing Auditorium.
- Raw Organization to Remain intact
- Respect Lorris' Vision for Transitional Interdisciplinary
- Bring Departments / College Together to Create a More Powerful Identity
- 45 PI's
- $69 Million Construction Budget?

## UTILITIES COORDINATION MEETING MINUTES- JANUARY 19, 2006

**Attendees:**

- Joe Harman, Project Manager, Campus Design and Construction
- Ken Carrillo, Mechanical Engineer, Campus Design and Construction
- Scott Jefferson, Electrical Engineer, Campus Design and Construction
- Lenard Barney, Land Surveyor / Utility Manager, Campus Utility Services
- Larry Hansen, Mechanical Engineer, Campus Design and Construction
- Dennis Crawford, Plumbing Shop Supervisor, Plant Operations
- Bob Peterson, Electrical Engineer, Campus Design and Construction
- Chris Atkins, Utility Analyst, Campus Utility Services
- Eric Browning, Campus Development Planner, Facilities Planning
- Peter Emerson, EDA
- Stephanie McCarthy, EDA

**Meeting Synopsis:**

- Review locations and capacities of existing utilities relative to the proposed site and facility loads.

**Utilities Review:**

**A.** Site Boundaries:

- Western edge of building to align with retaining wall at existing Pharmacy Building
- Northern edge of building of to be 40' off existing structure per code. If closer existing utilities must be addressed.
- Southern edge of building must not interfere with site lines of the road.
- Eastern edge of building **(?)**

**B.** Lenard Barney will supply EDA with a copy of the updated utilities plan ASAP (2 weeks).

**C.** Culinary Water: If the 8", 75/80 lb supply line that currently serves the existing Pharmacy Building has enough capacity, it can be extended to the south to service the new building (may need to pump to upper floors). Note the 8" line transitions to 6" as it runs along the east edge of the site. If the capacity is insufficient, a new supply line will need to tie into the supply line will need to be extended from the 12" main at Medical Drive South.

**D.** High Temp. Water: Existing 10" line runs along east side of site and is assumed to have enough capacity to serve the new facility (4" supply, 3" return) (This must be verified).

**E.** Sanitary Sewer: Existing 8" and 12" SS lines run along the south edge of the existing Pharmacy Building / north of the site. The 8" line services the Nursing Building, Pharmacy Building, and the Medical Library. The new facility will tie into the 12" line which currently serves the HSEB and Emma Eccles Jones. (Capacity to be verified).

**F.** Gas: Existing 2", 40lb line runs along the south edge of the existing Pharmacy Building / north of the site. This line serves the HSEB and has the capacity to service the new facility.
G. Storm Drain: Existing 24" line runs along Medical Drive South. Existing SD upstream lines that run through site carry water from other areas of the HS precinct. These lines will need to be rerouted and tied into the 24" line.

**H.** Power: 12470 service out of Red Butte substation. Capacity needs to be reserved for Huntsman Phase 3, therefore, remaining capacity may be insufficient for new facility. New transformer may be required. This should be resolved during the expansion of the hospital, however, it should be noted in the master plan as a potential problem but not included in the budget. Capacity of distribution system should be adequate to accommodate the new facility.

**I.** Communications: Duct bank available? Fiber available? Conduits? Two points of building access required. Communication line in walking area. EDA to contact David Kosanke (801)580-6931 to address communications issues.

**J.** Master plan project budget to include construction and soft costs. NetCom to be included as a soft cost item.

**K.** New parking structure to interface with a utility tunnel along north and possibly eastern edges of the site.

**L.** U of U to verify capacities available assuming 225,000 s.f. of building and 20w/sf of power.

## MEETING NO. 2 MINUTES- JANUARY 27, 2006

**Attendees:**

- James Bardsley
- Steve Panish
- John Mauger
- Art Broom
- Diana Brixner
- Steve Kern
- David Maher
- Joe Harman
- Tami Cleveland
- Lyle Knudsen
- Peter Emerson
- Mark Whiteley
- Stephanie McCarthy

**Meeting Synopsis:**

- Summary of Kick-Off Meeting
- Preliminary Definition of Scope
- Site Analysis – Opportunities and Constraints
- Site Layout Options
- Miscellaneous – Precedents
- Define Next Steps

**A. Summary / Review of Previous Meeting**

- Quality a priority, Quantity still important
- Emphasis of Educational Core – HSEB Library
- Physical junction of education corridor and translation corridor (*School of Health Sciences or Campus?)*= new Pharmacy Facility

**B. Site Clarifications**

- Updated utility maps available for pick up
- Sewer line runs through site, will need to be rerouted
- Lack of capacity at Red Butte Substation to be reviewed. Current availability allocated to Huntsman III.
- There is a question if there is enough capacity remaining for the Hospital expansion, needs to be confirmed.
- The current boundaries of the site appear to result in a 41,000 s.f. footprint. These parameters need to be reviewed and confirmed by campus planning. The College of Pharmacy was encouraged that this larger site capacity may not confine them to a 25,000 s.f. building footprint.
- Jim Bardsley indicated that the parking lot south of HSEB and east of the new Pharmacy Facility site would be difficult to utilize for a building site.
- The Master Plan document needs to consider the potential for the physical and programmatic extension of the School of Health Sciences Precinct.

**C. Site Clarifications**

- 3,500 gross s.f. per PI
- 1485 net s.f. per PI
- Jim Bardsley felt that space ratios were "smack on" at 3:1. Noted that they are moving toward 50/50
- Emma Eccles Jones $315/s.f. (hard cost)
- $360/s.f. projected cost does not include soft costs – add 25%
- Diana Brixner asked how her department, which utilizes offices more than labs, is accounted for in the benchmarking process. Mark Whiteley noted that the resulting spaces are flexible enough to be labs, support spaces or offices and that the exact allocation of space would be defined more clearly during the programming phase.

**D. Option 1**

- Maximize site
- Dense lab area
- No lecture hall
- Controlled access to labs
- Two structural systems = economy of construction
- Separate mechanical = economy of life cycle costs
- Lab Hoods – How many needed? Hoods are a premium. Communal hoods are points of contention. 2 of 4 Departments require hood intensive programs in organic and synthetic chemistry.

**E. Option 2 & 3**

- Less square footage
- Is café really needed? Cafe already available adjacent to the site at HSEB.
- Lecture Hall at south west corner of site = visual and physical interaction between public (potential patients) and researchers. Reconfirmation of the work.
- Consider advantages of re-orienting Lecture Hall to north east corner of site. Closer to public circulation, easier to secure research component of building.
- Separate Clinic and Dispensing Lab from Lecture Hall area.
- Open space could be a valuable programmatic element if designed thoughtfully. Current open space is an "appendage" – it is easy to ignore.
- Is 300 seat lecture hall really needed in new facility? College of Pharmacy only utilizes 3-4 times a year. This is really an institutional issue to be explored on a Health Sciences / University level to determine need.
- Advantages of Pharmacy in Facility: Will operate under Hospital Pharmacy License therefore will not effect Hospital economically.
- University cannot advertise their pharmacy service, therefore it will not negatively impact private sector.
- Could serve students, faculty and hospital staff.
- Could be used as a location to facilitate studies, could act as a positive promotion for pharmacy programs in the valley
- College of Pharmacy needs to identify their list of priorities of programmatic elements and spaces ("Sacred Cows") that will go into the building in order to determine the least amount of money needed to build the new facility.

- The budget needs to be identified during the master planning stage. While the content of the parameters of the master plan should provide a flexible framework for the following phases and allow for future options, the budget will have little or no flexibility.
- Consolidation is critical and takes priority over open spaces, i.e. atrium space in the facility.
- Integration of Research Park
- The college currently occupies approximately 90,000 net s.f. across campus / Research Park. The design team has been asked to target a 125,000 net s.f. facility
- The facility is currently approved to go 5 stories. A massing analysis will be needed to determine if the project can go to 6 (or 7) floors. Tami Cleveland has indicated that she will be doing a preliminary study.

**F. Action Items:**

- The College of Pharmacy needs to define a priority list of "Sacred Cows" and forward it to the design team by the end of the day Friday, February 3rd.
- EDA and Joe Harman to confirm next meeting date and time. A tentative date of Friday, February 10th was discussed.
- Art Broom to organize a tour of the "good and bad" elements of the existing facilities. This tour will be scheduled for the day prior to the next meeting. The following have expressed interest in participating in the tour: Art Broom, David Maher, Joe Harman, Peter Emerson, Mark Whiteley, Stephanie McCarthy. If anyone else is interested in attending, please notify Art or Stephanie.
- Stephanie McCarthy to post -1.06.'06 and 01.27.'06 Power Point Presentations to EDA's FTP site and forward directions to access the site.
- Stephanie McCarthy to forward digital file of presumed site parameters for review by Tami Cleveland.
- Preliminary massing Study by Tami Cleveland.
- Steering Committee to review preliminary Master Plan document for content and advise EDA/ nbbj of any additions or clarifications to be included.
- EDA to pick up updated utility maps.
- Joe Harman and Tami Cleveland to review Red Butte Substation capacity available for Hospital expansion once Huntsman III is accounted for.

## MEETING NO. 3 MINUTES - FEBRUARY 17, 2006

**Attendees:**

- Steve Panish
- Art Broom
- Diana Brixner
- Bill Crowley
- Steve Kern
- Chris M. Ireland
- David Maher
- Joe Harman
- Tami Cleveland
- Peter Emerson
- Mark Whiteley
- Stephanie McCarthy

**Meeting Synopsis:**

- Summary of Meeting No. 2
- Review of "Sacred Cows"
- Review Bench Marking Assumptions
- Explore Development Opportunities (Options 1-4)
- Define Next Steps

**A. Sacred Cows**

- Sacred Cows to include computer service operations
- College to review vision for the auditorium with Lorris Betz. Will it stay or will it go?

**B. Program Analysis:** The list of sacred cows was translated into a preliminary program for the purposes of evaluating overall square footage (gross and net), number of PI's accommodated and cost. Potential lab layouts (chemistry and non-chemistry based) were also reviewed in this process.

- Not all departments are chemistry based - Pharmacology and Toxicology Department biology based.
- Pharmacotherapy Department will have a need for Pharmacokinetics lab space. 3-4 labs should be sufficient.
- Steve Kern thinks that 10 staff/PI is high.
- Faculty to review program analysis for content.
- The program analysis is bases on the assumption of 45-48 PIs (12 PIs per Department). Bill Crowley voiced concern that this number is too low as he has 18-20 PIs in Pharmacology and Toxicology alone. The college will review these numbers and get back to the design team.
- Currently not enough admin. station capacity to serve dispersed departments.
- LRDP includes the development of a plaza in front of the Medical Library
- Design team to provide UCSF's floor space/PI ratio for a reality check.

**C. Master Planning Options 1 - 4:** Four site / building configuration options were reviewed with the steering committee.

- *Option 1* (125,000 net s.f.) accommodates 45-48 PI's on the given site (41,000 s.f. footprint). This option is very compact and will not allow for natural light to all lab / work

spaces.
- *Option 2* (95,000 net s.f.) accommodates 36 PI's on the given site (41,000 s.f. footprint). This option does provide for natural light to reach all lab / work spaces through an atrium or outdoor courtyard, but does not achieve the 125,000 net s.f future space needs of the college.
- *Option 3* (125,000 net s.f.) accommodates 45-48 PI's by extending the site to the west beyond its currently defined boundaries. This option does provide for natural light to reach all lab / work spaces through an atrium or outdoor courtyard . This option would need to be reviewed in the context of the LRDP and approved by the University.
- *Option 4* (125,000 net s.f.) accommodates 45-48 PI's by utilizing the existing parking lot to the east of the given site and south of the HSEB. This option does provide for natural light to reach all lab / work spaces through an atrium or outdoor courtyard. This option would need to be reviewed in the context of the LRDP and approved by the University.
- The steering committee discussed the pros and cons of the atrium space. Art Broom and Bill Crowley voiced concern that it is a potential waste of valuable space and dollars. The quality of the lab / work space must take priority. Diana Brixner felt the human comfort / spatial quality benefits of a well designed and utilized atrium were vital to the success of the lab / work spaces and the overall building. Steve Kern encouraged the committee not to throw out the possibility of an atrium at this early master planning stage.
- The steering committee directed the design team to assume the need to accommodate 45-48 PI's (this number to be verified by the college as stated above).
- Joe Harman stated that one advantage to an atrium or courtyard is the ability to utilize two construction types. One for the labs/support and core facilities and one for the offices. The later having the potential to be more economical. He reminded the steering committee that we are not designing the building in this phase and urged the team not to throw any ideas out at this time.
- Joe Harman also stated that the LRDP is a document based on a "snapshot" in time and that the proposed changes to the buildings site parameters are appropriate and need to be reviewed and considered by his department and the University.
- Tami Cleveland will guide the steering committee / design team through the process of requesting modifications to the LRDP.
- Tami stated that she believes additional planning needs to be done in the Health Sciences District.
- Joe Harman stated that he can get preliminary feedback once he and Tami are provided with documentation of the potential changes to the boundaries of the site.
- Design team to confirm office space requirements with Bruce Gillars.
- Design team to assemble a preliminary master plan document that addresses options to date (including pros and cons / costs of each) and publish to the steering committee prior to the next meeting at which time the team will be given a direction to proceed with the development of fundraising materials and the completion of the master plan document.

**D. Action Items**
- College of Pharmacy to:
  1. Verify PI projection numbers
  2. Have faculty review program analysis for content
  3. Review preliminary master plan document to be published by design team (see below)

- Design team to:
  1. Furnish floor space/PI ratios for UCSF for reality check.
  2. Acquire office space requirements from Bill Gillars.
  3. Assemble a preliminary master plan document that addresses options to date (including pros and cons / costs of each) and publish to the steering committee prior to the next meeting.

## MEETING NO. 4 MINUTES - JULY 26, 2006

**Attendees:**

- Steve Panish
- Art Broom,
- Bruce Gillars
- Joe Harman
- Peter Emerson
- Mark Whiteley
- Stephanie McCarthy

**Meeting Synopsis:**

- Review of Development Options
- Directive from UofU:
    1. Size (Phase I & Phase II),
    2. Budget,
    3. Option Selection

**Note:** At the conclusion of Meeting #3 held 02.17.'06, the design team requested direction from the Steering Committee relative to scope confirmation and site selection. Select members of the committee reconvened on July 26, 2006 and gave the following directives to the design team:

**A.** In September of '06 legislative approval was given for the construction of 150,000 GSF at 65% efficiency (97,500 NSF). While this number is not consistent with the projected future needs of the College of Pharmacy (205,000 GSF), it does allow for the consolidation of existing academic programs of the college and can be accommodated on the site located immediately to the South West of the L.S. Skaggs Pharmacy Building.

**B.** The additional 55,000 GSF needed for future expansion should be considered as Phase II and the document should propose utilization of the site directly across the HS pedestrian corridor from Phase I , immediately adjacent to the South West of the HSEB for consideration. Note that this site can accommodate more than 55,000 GSF. Additional site capacity could be identified as an opportunity for co-location with other HS disciplines.

**C.** Option 4 (per 02.17.'06 power point presentation) is therefore the preferred scheme of the committee for Phase I and Phase II build-out. This version will however be modified to show 150k gross on the phase 1 pharmacy site connected to a possible phase 2 on the eastern site.

**D.** The design team was asked to incorporate a service corridor (in conjunction with the utilities corridor) accessed from Medical Drive South to run between the L.S. Skaggs Building and the new facility.

**E.** Allow for a 4,000 – 5,000 s.f. Animal Facility (mixture of procedure and housing) in new building. Design team to contact Jack Taylor concerning Animal Labs.

**F.** Document to provide a line item in cost estimate for parking garage in phase I

**G.** Provide for underground parking garage in Phase II with connection to existing HSEB parking garage.

**H.** Once building is complete, Pharmacy to vacate L.S. Skaggs building 100%. Space in Biopolymers will be retained by Pharmacy until a determination of actual space requirements can be made after completion of construction.

**I.** Vibration Control Standards (similar to Biopolymers) to be addressed in document. The issue of Band Width should be addressed in the program document.

**J.** College of Pharmacy Strategic Plan to be included in appendix.

**K.** The design team raised concerns about the sf numbers/researcher outlined in the Strategic Plan. Art Broom clarified that the numbers addressed lab and lab support space only and excluded offices, etc

**L. Action Items:** The design team will furnish a final rough draft to the Steering Committee on August 24, 2006. A Steering Committee meeting has been scheduled for Wednesday, September 6, 2006 at 3:00pm in the HS Board Room to formally review the final draft.

## MEETING NO. 5 MINUTES - SEPTEMBER 6, 2006

**Attendees:**

- James Bardsley
- Steve Panish
- John Mauger
- Art Broom
- Barbara Crouch
- Bill Crowley
- Bruce Gillars
- Chris M. Ireland
- Bill McCreary
- Mark Munger
- Wayne Peay
- Joseph Harman
- Tami Cleveland
- Peter Emerson
- Mark Whiteley
- Stephanie McCarthy

**Meeting Synopsis:**

**The goal of this meeting was to review and approve the Draft Master Plan Document dated 08.25.06**

**A.** The Draft Master Plan Document dated 08.25.06 distributed for review on 08.25.06. Per the Steering Commitee's request the following revisions will be made to the document prior to final publication:

1. Tami Cleveland, Joseph Harman and EDA will meet to review and edit the Capital Budget Estimate (CBE). (This meeting was held September 13, 2006 at 10:00 am)

2. The Table of Contents will be renumbered, removing teh ".1" designation from the Executive Summary allowing it to be used as a stand alone document as needed.

3. A signature page will be added to the document.

4. Add the names of Bruce Gillars and Mark Munger to the acknowledgements page.

5. Clarify the orientation of the proposed facility renderings by adding 1.) a building key and a view orientation diagram and 2.) adjust the orientation of the plans.

**B.** Pending the completion of the items listed above, the Steering Committee approved the U of U College of Pharmacy Master Plan document.

## SITE OPTION APPRAISALS .APP-4

**Site Option Appraisals:**
During the course of the master planning study the design team investigated the impact that different massing and stacking approaches would have on site capacity, density; and how much of the existing and future college population could be accommodated on the site. The investigations also assessed how different building configurations would contribute to the campus environment in this part of the Health Sciences Corridor and act as a catalyst for the redevelopment of the Western side of the Health Sciences Campus,

**Option 1**
This high density approach maximized building area and hence the research population that could be accommodated on the site. The 205,000 gross square feet achieved would enable the College to consolidate all of its future growth plans onto this single site in a highly flexible deep floor plate building. On the downside, however the density of space did not produce any internal or external amenity spaces.

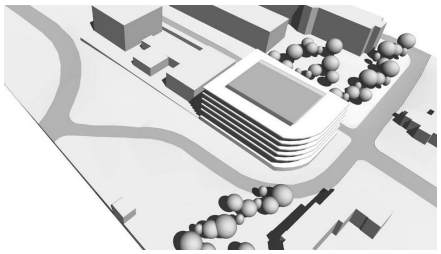
**Option 2 – 155,000 gross sf**
This medium density approach sought to achieve a balance between providing a highly efficient, flexible building with indoor and outdoor spaces that contribute to the overall campus, the quality of the Health sciences pedestrian corridor and provide suitable internal collaboration spaces at a variety of types and scales. While this approach would accommodate the College's current population, it did not provide any area for future expansion.

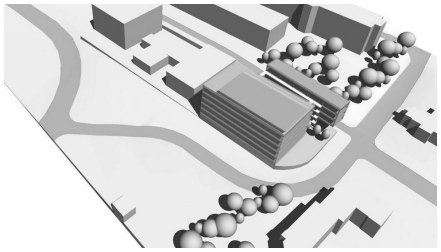
**Option 3 - 205,000 gross sf**
This option investigated maximizing built area to accommodate the College's current and future population and making a positive contribution to the site and campus by utilizing the adjacent site to the West.

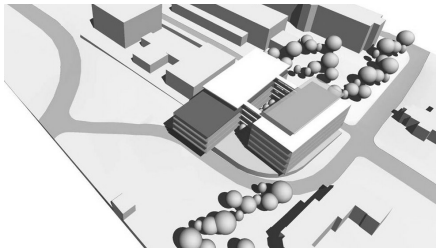
**Option 4- 205,000 gross sf**
This option investigated maximizing built area to accommodate the College's current and future population and making a positive contribution to the site and campus by utilizing the adjacent site to the East.  It also sought to produce a more formal civic gateway arrangement at the southern extent of the Health Sciences Corridor.

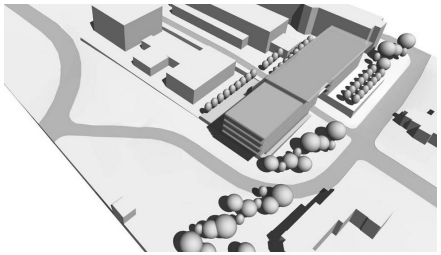
Assessing these four options lead to the final design illustrated in the main body of this document. Based around option four it was to have the following attributes:

- 150,000 gross square feet
- Building accommodated only the designated site
- Able to link to a future phase two building to the east that would form the gateway suggested by option 4.


**Option 1**


**Option 2**


**Option 3**


**Option 4**